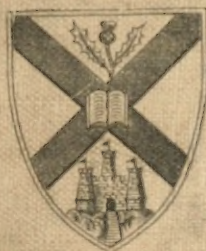


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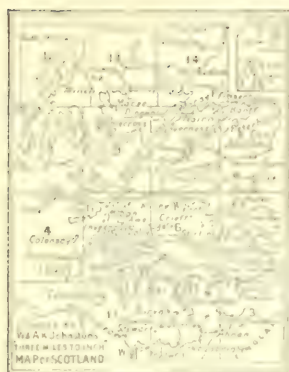
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# The Calendar.

1901—OCTOBER, 31 DAYS.

Senatus Offices open throughout the year from 10 to 4.

Saturdays 10 to 1, unless otherwise stated.

**ANNUS ACADEMICUS** begins.

First day for payment of **MATRICULATION** fee.

Practical Anatomy begins.

**BURSARY EXAM.** begins on 26th September.

**PREL. EXAM.** begins 27th September. See Time-Tables.  
pages 124, 275, 386.

Last day for Names of Candidates for First Year Law  
Bursaries to be given in.

2 W

3 Th

Last day for Names of Candidates for Degrees in Arts and  
Science, and for B.L. Preliminary on M.A. Standard  
to be given in, Certificates examined, and Fees paid.

4 Fr

5 Sa

6 S

7 M

8 Tu

Examinations for M.A., and for B.L. Preliminary on M.A.  
Standard begin. See Time-Table, page 128.

Last day for Names of Candidates for B.D. to be given  
in, Certificates examined, and Fees paid.

9 W

10 Th

Examinations for Degrees in Science begin. See Time-  
Table, pages 276 and 277.

11 Fr

12 Sa

*Meeting of Senatus Academicus* at 2 P.M.; Standing  
Committees to be appointed.

13 S

1901—OCTOBER—*continued.*

14	M	{ Meeting of University Court at 4 P.M. <b>CLASSES IN FACULTY OF MUSIC OPEN.</b> <b>CLASSES IN THE FACULTIES OF ARTS, SCIENCE, LAW, AND MEDICINE OPEN.</b> Examinations for B.D. begin. See Time-Table, page 301. Court of Session sits.
15	Tu	{ Library open during Winter Session from 10 to 4: Read- ing Rooms in Old Buildings, from 10 to 4 and also 8 to 10: Saturdays 10 to 1. Reading Room in New Buildings open from 9 to 5 and 8 to 10: Saturdays 9 to 12. Last day for entering Names for Second and Third Year Bursaries in Law.
16	W	
17	Th	
18	Fr	
19	Sa	
20	S	
21	M	{ Last day for Names of Candidates for Examinations for Degrees in Law to be given in, Certificates examined, and Fees paid.
22	Tu	<b>CLASSES IN FACULTY OF DIVINITY OPEN.</b>
23	W	
24	Th	
25	Fr	{ <i>Meeting of General Council at 3 o'clock. Two Assessors to be elected.</i>
26	Sa	
27	S	
28	M	{ Examinations for Degrees in Law begin. See Time- Table, page 330.
29	Tu	
30	W	
31	Th	



# 1901—NOVEMBER, 30 DAYS.

1	Fr	Examinations for Divinity Bursaries begin.
2	Sa	
3	S	
4	M	Oral Examinations in Law.
5	Tu	
6	W	
7	Th	
8	Fr	
9	Sa	<b>KING EDWARD VII.</b> born 1841.
10	S	
11	M	Martinmas.
12	Tu	
13	W	
14	Th	{ Certificates for Bursaries, &c., granted by Deans.
15	Fr	{ Fellowships, Scholarships, Bursaries, paid by Factor.
16	Sa	
17	S	
18	M	<i>Meeting of University Court at 4 P.M.</i>
19	Tu	
20	W	
21	Th	
22	Fr	
23	Sa	
24	S	
25	M	
26	Tu	
27	W	
28	Th	
29	Fr	
30	Sa	{ Registration of Members of General Council for Register of 1902 ends. <i>Meeting of Senatus Academicus at 2 P.M.</i>

# 1901—DECEMBER, 31 DAYS.

1	S	QUEEN ALEXANDRA born, 1844.
2	M	{ Last day for lodging Theses and for payment of Fees for D.Sc., D.Phil., and D.Litt.
3	Tu	
4	W	
5	Th	
6	Fr	
7	Sa	
8	S	
9	M	
10	Tu	
11	W	
12	Th	
13	Fr	
		{ <i>Meeting of Senatus at 2 P.M. :—</i>
14	Sa	{ (1) Election of Managers for Royal Infirmary. (2) Report to Widows' Fund. (3) Arrangements for Winter and Summer Sessions, 1902-1903.
15	S	
16	M	<i>Meeting of University Court at 4 P.M.</i>
17	Tu	
18	W	
19	Th	
20	Fr	{ Classes meet for last time before Christmas Vacation. Senatus Offices open from 10 A.M. to 1 P.M. till 7th January: closed on Christmas, New Year's day, and Saturdays.
21	Sa	
22	S	
23	M	
24	Tu	
25	W	<b>CHRISTMAS DAY.</b>
26	Th	{ Library, including Reading Rooms at Old Buildings, open from 10 to 1 till 7th January: closed on Satur- days. Reading Room, New Buildings, closed for same period.
27	Fr	
28	Sa	
29	S	
30	M	
31	Tu	

# 1902—JANUARY, 31 DAYS.

1	W	
2	Th	
3	Fr	
4	Sa	
5	S	
6	M	
7	Tu	Classes meet after Christmas Vacation.
8	W	
9	Th	
10	Fr	
11	Sa	
12	S	
13	M	{ <i>Meeting of University Court at 4 P.M.</i> Appointment of Examiners.
14	Tu	
15	W	
16	Th	
17	Fr	
18	Sa	
19	S	
20	M	{ <i>Meeting of University Court for hearing Registration Appeals (if any) at 4 P.M.</i>
21	Tu	
22	W	ACCESSION OF KING EDWARD VII., 1901.
23	Th	
24	Fr	
25	Sa	
26	S	
27	M	
28	Tu	
29	W	
30	Th	{ <i>Meeting of Senatus Academicus at 2 P.M. :—</i> (1) Report of D.D. Committee to be presented. (2) Report of LL.D. Committee to be presented. (3) Annual Report on University Library to be given in.
31	Fr	

# 1902—FEBRUARY, 28 DAYS.

1	Sa	
2	S	Candlemas.
3	M	
4	Tu	
5	W	
6	Th	
7	Fr	
8	Sa	
9	S	
10	M	Holiday in Faculty of Arts.
11	Tu	
12	W	
13	Th	
14	Fr	
15	Sa	
16	S	
17	M	<i>Meeting of University Court at 4 P.M.</i>
18	Tu	
19	W	
20	Th	
21	Fr	
22	Sa	<i>Meeting of Senatus Academicus at 2 P.M. :—</i> (1) Report of D.D. Committee to be moved. (2) Report of LL.D. Committee to be moved. (3) Resolution to Elect Member of General Assembly.
23	S	
24	M	
25	Tu	
26	W	
27	Th	
28	Fr	

## 1902—MARCH, 31 DAYS.

1	Sa	{ Last day for Names for Preliminary Examinations to be given in and Fees paid.
2	S	{ Last day for Names of Candidates for Degrees in Law to be given in and Fees paid.
3	M	{ Last day for Names of Candidates for Degrees in Arts, for Schoolmaster's Diploma, for B.L. Preliminary on M.A. Standard to be given in and Fees paid. <i>The Regulations as to late entries for Examination in Chemistry, Botany, and Zoology, for Degrees in Arts are the same as in the Faculty of Medicine.</i>
4	Tu	{ Last day for Names of Candidates for the First Professional Examination in Medicine, and for Examination for Degrees in Science to be given in and Fees paid. <i>The Regulations as to late entries for Examinations in Science are the same as in the Faculty of Medicine.</i>
5	W	
6	Th	
7	Fr	
8	Sa	
9	S	{ KING EDWARD VII. married, 1863. Last day for Names for Examinations for Degrees in Music to be given in, Certificates examined, and Fees paid.
10	M	{ Last day for Names for Second Professional Examination in Medicine to be given in and Fees paid.
11	Tu	
12	W	
13	Th	
14	Fr	<b>CLASSES IN FACULTY OF DIVINITY CLOSE.</b> { Last day for Names for Third Professional Examination in Medicine to be given in and Fees paid. Last day for Names of Candidates for Scholarships in Arts and Science to be intimated. Applications for Grants from Dickson Travelling Fund to be lodged.
15	Sa	
16	S	{ Examinations for M.A., and for Degrees in Law begin.
17	M	{ See Time-Tables, pages 128 and 330. <i>Meeting of University Court at 4 P.M.</i>
18	Tu	{ Last day for Names for Examinations in Divinity to be given in, Certificates examined, and Fees paid.
19	W	<b>CLASSES IN FACULTY OF LAW CLOSE.</b> Final Science Examinations begin. See Time-Table, page 277.
20	Th	{ Names for Final Examination in Medicine (Old Regulations) to be given in and Fees paid.



1902—MARCH—*continued.*

21	Fr	<p><b>CLASSES IN FACULTY OF MEDICINE CLOSE.</b>            Certificates for First Professional and Science Degrees Examinations to be examined from 10 to 3.</p>
22	Sa	<p>(Practical Chemistry Examination and Oral Examinations for Degrees in Arts, Science, and Medicine may begin. Dates, hours, &amp;c., will be posted at University gates.            Certificates for Second Professional Examination to be examined from 10 to 1.</p>
23	S	
24	M	<p>First Professional Written Examination in Medicine, B.Sc. Examinations, and Science Subjects for M.A. begin.            See Time-Tables, pages 128, 276, 396.            Oral Examinations in Law.            Examinations for Degrees in Music begin. See Time-Table, page 445.</p>
25	Tu	<p>B.D. Examinations begin. See Time-Table, page 301.            (Second Professional Examinations begin. See Time-Tables, pages 396 and 403.</p>
26	W	<p>Certificates for Third Professional Examination (New Regulations) and for Final Examination (Old Regulations) to be examined from 10 to 1.</p>
		<p><b>CLASSES IN THE FACULTIES OF ARTS AND SCIENCE CLOSE.</b>            Classes in the Faculties of Law and Medicine which qualify for Graduation in Arts or in Science close on 21st March.</p>
27	Th	<p>Certificates for M.A. Examinations in April to be examined before 4 P.M.            Third Professional Examination (New Regulations), and Forensic Medicine and Public Health (Old Regulations). See Time-Tables, pages 397, 403.</p>
		<p><b>GOOD FRIDAY. HOLIDAY.</b>            Examinations for M.A. with Honours begin. See Time-Table, page 129.</p>
28	Fr	<p>Preliminary Examinations begin. See Time-Table, pages 125, 276, 387.</p>
29	Sa	<p>(<i>Meeting of Senatus Academicus at 2 P.M. :—</i>            (1) Member of Assembly to be elected.            (2) Acceptances of Honorary Degrees.            Library closed.</p>
30	S	<b>EASTER SUNDAY.</b>
31	M	

# 1902—APRIL, 30 DAYS.

1	Tu	
2	W	
3	Th	
4	Fr	
5	Sa	
6	S	
7	M	
8	Tu	
9	W	
10	Th	<i>Meeting of Senatus in M<sup>e</sup> Ewan Hall at 9.30 A.M.</i>
11	Fr	<b>GRADUATION CEREMONIAL IN DIVINITY, LAW, ARTS, AND SCIENCE, IN M<sup>e</sup>EWAN HALL, AT 10 A.M.</b> <b>COMMEMORATION SERVICE IN ST GILES'S AT 12.</b> Senatus Offices open from 10 to 1 till 1st May: closed on Saturdays.
12	Sa	
13	S	
14	M	<i>Meeting of University Court at 4 P.M.</i>
15	Tu	{ Reading Room, New Buildings, open from 10 A.M. to 1 P.M. till 21st April: closed on Saturday. Class of Operative Surgery opens.
16	W	
17	Th	{ Names of Candidates for Final Exam. in Medicine (New Regulations) to be given in and Fees paid.
18	Fr	
19	Sa	
20	S	
21	M	{ Inspection of Library. All books to be returned before this date. Library closed for lending till 28th inst. <b>EDINBURGH HOLIDAY.</b>
22	Tu	{ Certificates for Final Exam. (New Regulations) to be examined from 10 to 1.
23	W	
24	Th	
25	Fr	
26	Sa	
27	S	
28	M	
29	Tu	
30	W	Last day for lodging Theses for M.D. and for Ch.M.

# 1902—MAY, 31 DAYS.

1	Th	<b>SUMMER SESSION OPENS.</b> Library and Reading Rooms in Old Buildings open from 10 to 3 during Summer Session: Saturdays 10 to 1. Reading Room in New Buildings open from 9 to 5 and 8 to 10: Saturdays 9 to 12.
2	Fr	Clinical Medicine Examination begins.
3	Sa	
4	S	
5	M	
6	Tu	
7	W	<i>Meeting of University General Council at 3 P.M.</i>
8	Th	
9	Fr	
10	Sa	
11	S	
12	M	<i>Meeting of University Court at 4 P.M.</i>
13	Tu	<b>LAW CLASSES OPEN.</b>
14	W	
15	Th	Whitsunday.
16	Fr	
17	Sa	
18	S	
19	M	Fellowships, Scholarships, Bursaries paid by Factor.
20	Tu	Victoria Day. General Assembly meets. <b>HOLIDAY.</b>
21	W	
22	Th	
23	Fr	
24	Sa	
25	S	
26	M	Duchess of Cornwall and York born, 1867.
27	Tu	
28	W	Clinical Surgery Exams. begin.
29	Th	
30	Fr	<i>Meeting of Senatus Academicus at 3 P.M.</i>
31	Sa	

# 1902—JUNE, 30 DAYS.

1	S	
2	M	
3	Tu	Duke of Cornwall and York born 1865.
4	W	
5	Th	
6	Fr	
7	Sa	
8	S	
9	M	
10	Tu	
11	W	
12	Th	
13	Fr	
14	Sa	
15	S	
16	M	<i>Meeting of University Court at 4 P.M.</i> Final Prof. Written Exam. begins. See Time-Table, pages 397, 403.
17	Tu	
18	W	
19	Th	
20	Fr	( Last day for Names to be entered and Fees paid for Candidates for Clinical Examinations for M.D. and for Ch.M.
21	Sa	
22	S	
23	M	
24	Tu	Midsummer Day.
25	W	
26	Th	
27	Fr	<i>Meeting of Senatus Academicus at 3 P.M.</i>
28	Sa	
29	S	
30	M	

# 1902—JULY, 31 DAYS.

1	Tu	
2	W	
3	Th	
4	Fr	<p>Last day for Names of Candidates for Examinations for Degrees in Arts and Science, and for First Professional Examination in Medicine to be given in and Fees paid. <i>The Regulations of the Faculty of Medicine as to late entry fees applies to all entries for Chemistry, Botany, and Zoology.</i></p> <p>Clinical Medicine Examination for M.D. (New Regulations) begins at 9.45 A.M.</p> <p>Examination for Ch.M. begins.</p>
5	Sa	
6	S	Duke of Cornwall and York married, 1893
7	M	
8	Tu	
9	W	
10	Th	
11	Fr	<p>Last day for Names of Candidates for Second Professional Examination (New and Old Regulations) to be given in and Fees paid.</p>
12	Sa	
13	S	
14	M	<i>Meeting of University Court at 4 P.M.</i>
15	Tu	
16	W	<p><b>SUMMER SESSION ENDS.</b></p> <p>Certificates for First Professional and Arts and Science Examinations to be examined from 10 to 3.</p> <p>Names of Candidates for Third Professional Examination in Medicine (New Regulations) to be given in and Fees paid.</p>



# 1902—JULY—*continued.*

		{ Last day for names to be entered for Graduation, and for payment of Registration Fee.
17	Th	{ Second Professional Examination Certificates to be examined from 10 to 1.
		{ Practical Chemistry Examination for Degrees in Arts, Science, and Medicine may begin. Date, hours, &c., will be posted at University gates.
18	Fr	{ Written Examinations for Degrees in Arts (Dept. of Science), for Degrees in Science, and First Professional Examination in Medicine begin. See Time-Tables, pages 130, 277, 396.
19	Sa	
20	S	
21	M	{ Second Professional Examination in Medicine begins. See Time-Tables, pages 396 and 403.
22	Tu	{ Certificates for Third Professional Examination (New Regulations) to be examined from 10 to 1.
23	W	{ Third Professional Examination. See Time-Table, pages 397, 403.
24	Th	
25	Fr	{ <i>Meeting of Senatus Academicus</i> at 3 P.M. { Candidates for Degrees to be reported.
26	Sa	{ GRADUATION CEREMONIAL IN MEDICINE, SCIENCE, &c., AT 10 a.m. { <i>Meeting of Senatus</i> in M <sup>c</sup> Ewan Hall at 9.30 A.M.
27	S	
28	M	{ Senatus Offices open from 10 to 1 till 1st October: closed on Saturdays.
29	Tu	
30	W	
31	Th	

# 1902—AUGUST, 31 DAYS.

## LAMMAS.

Library and Reading Rooms in Old Buildings open from 10 to 1 till 1st September: closed on Saturdays. Reading Room, New Buildings, closed during same period.

1	Fr
2	Sa
3	S
4	M
5	Tu
6	W
7	Th
8	Fr
9	Sa
10	S
11	M
12	Tu
13	W
14	Th
15	Fr
16	Sa
17	S
18	M
19	Tu
20	W
21	Th
22	Fr
23	Sa
24	S
25	M
26	Tu
27	W
28	Th
29	Fr
30	Sa
31	S

# 1902—SEPTEMBER, 30 DAYS.

Library and Reading Rooms in Old Buildings open from 10 to 3: Saturdays 10 to 1. Reading Room, New Buildings, open from 10 to 1: closed on Saturdays.

## EDINBURGH HOLIDAY.

Last day for Names of Candidates for Preliminary Examinations to be given in and Fees paid.  
Last day for entering for University Bursaries in the Faculties of Arts, Science, and Medicine.

Bursary Examinations may begin.

Preliminary Examinations may begin. Time-Tables for the Bursary and Preliminary Examinations will be given in the CALENDAR for 1902-1903 and in the Regulations issued separately.

# Calendar for the Academic Year 1902-1903.

## OCTOBER 1902.

S	5	12	19	26
M	6	13	20	27
Tu	7	14	21	28
W	1	8	15	22
Th	2	9	16	23
Fr	3	10	17	24
Sa	4	11	18	25

## NOVEMBER 1902.

S	2	9	16	23	30
M	3	10	17	24	
Tu	4	11	18	25	
W	5	12	19	26	
Th	6	13	20	27	
Fr	7	14	21	28	
Sa	1	8	15	22	29

## DECEMBER 1902.

S	7	14	21	28
M	1	8	15	22
Tu	2	9	16	23
W	3	10	17	24
Th	4	11	18	25 <sup>1</sup>
Fr	5	12	19	26
Sa	6	13	20	27

## JANUARY 1903.

S	4	11	18	25
M	5	12	19	26
Tu	6	13	20	27
W	1	8	15	22
Th	1	8	15	22
Fr	2	9	16	23
Sa	3	10	17	24

## FEBRUARY 1903.

S	1	8	15	22
M	2	9 <sup>2</sup>	16	23
Tu	3	10	17	24
W	4	11	18	25
Th	5	12	19	26
Fr	6	13	20	27
Sa	7	14	21	28

## MARCH 1903.

S	1	8	15	22	29
M	2	9	16	23	30
Tu	3	10	17	24	31
W	4	11	18	25	
Th	5	12	19	26	
Fr	6	13	20	27	
Sa	7	14	21	28	

## APRIL 1903.

S	5	12	19	26
M	6	13	20 <sup>4</sup>	27
Tu	7	14	21	28
W	1	8	15	22
Th	2	9	16	23
Fr	3	10 <sup>3</sup>	17	24
Sa	4	11	18	25

## MAY 1903.

S	3	10	17	24	31
M	4	11	18	25	
Tu	5	12	19	26	
W	6	13	20	27	
Th	7	14	21	28	
Fr	1	8	15	22	29
Sa	2	9	16	23	30

## JUNE 1903.

S	7	14	21	28
M	1	8	15	22
Tu	2	9	16	23
W	3	10	17	24
Th	4	11	18	25
Fr	5	12	19	26
Sa	6	13	20	27

## JULY 1903.

S	5	12	19	26
M	6	13	20	27
Tu	7	14	21	28
W	1	8	15	22
Th	2	9	16	23
Fr	3	10	17	24
Sa	4	11	18	25

## AUGUST 1903.

S	2	9	16	23	30
M	3	10	17	24	31
Tu	4	11	18	25	
W	5	12	19	26	
Th	6	13	20	27	
Fr	7	14	21	28	
Sa	1	8	15	22	29

## SEPTEMBER 1903.

S	6	13	20	27
M	7	14	21 <sup>4</sup>	28
Tu	1	8	15	22
W	2	9	16	23
Th	3	10	17	24
Fr	4	11	18	25
Sa	5	12	19	26

<sup>1</sup> Christmas.

<sup>2</sup> Holiday in Faculty of Arts.  
<sup>4</sup> Edinburgh Holiday.

<sup>3</sup> Good Friday.

ADDRESSES OF THE PRINCIPAL, PROFESSORS,  
EMERITI AND RESIGNED PROFESSORS, AND  
UNIVERSITY LECTURERS

I.—PRINCIPAL AND PROFESSORS.

Principal Sir William Muir, Dean Park House.

Professor Annandale, 34 Charlotte Square.

„ Baldwin Brown, 20 Lansdowne Crescent.

„ Bayley Balfour, Inverleith House.

„ Beare, University.

„ Crum Brown, 8 Belgrave Crescent.

„ Butcher, 27 Palmerston Place.

„ Chiene, 26 Charlotte Square.

„ Chrystal, 5 Belgrave Crescent.

„ Copeland, Royal Observatory, Blackford Hill.

„ Eggeling, Brunstane House, Joppa, Midlothian.

„ Ewart, Penicuik.

„ Flint, Johnstone Lodge, Craigmillar Park.

„ Fraser, 13 Drumsheugh Gardens.

„ Geikie, Kilmorrie, Colinton Road.

„ Sir Ludovic Grant, Bart., 4 Belgrave Crescent.

„ Greenfield, 7 Heriot Row.

„ Hardie, 4 Chalmers Crescent.

„ Kennedy, 33 Fountainhall Road.

„ Kirkpatrick, Southview, Murrayfield.

„ Laurie, 22 George Square.

„ Sir Henry D. Littlejohn, 24 Royal Circus.

„ Lodge, 25 Hope Terrace.

„ Mackinnon, 15 Corrennie Gardens.

„ Mackintosh, 2 Drummond Place.

„ Mounsey, 24 Glencairn Crescent.

„ Nicholson, 3 Belford Park.

„ Niecks, 24 Dick Place.

„ Patrick, 8 Strathearn Road.



Professor A. S. Pringle Pattison, 16 Church Hill.

- „ Rankine, 23 Ainslie Place.
- „ Saintsbury, 2 Eton Terrace.
- „ Schäfer, 19 Coates Gardens.
- „ Seth, 3 Queen's Crescent.
- „ Simpson, 52 Queen Street.
- „ Hunter Stewart, 9 Learmonth Gardens.
- „ Taylor, 6 Greenhill Park.
- „ Sir Wm. Turner, 6 Eton Terrace.
- „ Wallace, 10 East Claremont Street.
- „ Wyllie, 44 Charlotte Square.

## II.—PROFESSORS EMERITI.

Archibald Hamilton Charteris, D.D., formerly Professor of Biblical Criticism and Biblical Antiquities ; Cameron House, Dalkeith Road.

Alexander Campbell Fraser, D.C.L., LL.D., formerly Professor of Logic and Metaphysics ; Gorton, Hawthornden, Midlothian.

Norman Macpherson, LL.D., formerly Professor of Scots Law ; 6 Buckingham Terrace, Edinburgh.

David Masson, LL.D., formerly Professor of Rhetoric and English Literature ; 2 Lockharton Gardens, Edinburgh.

Sir Herbert Stanley Oakeley, D.C.L., LL.D., Mus. D., formerly Professor of Music ; 38 Marine Parade, Dover.

Peter Guthrie Tait, M.A., D.Sc., formerly Professor of Natural Philosophy, 38 George Square.

## III.—PROFESSORS RESIGNED.

Theodor Aufrecht, M.A., LL.D., Ph.D., formerly Professor of Sanskrit ; The University, Bonn.

Sir Archibald Geikie, LL.D., formerly Professor of Geology ; 10 Chester Terrace, Regent's Park, London.

Henry Goudy, LL.D., formerly Professor of Civil Law ; now Professor of Civil Law, University, Oxford.

Right Hon. Lord Lister, LL.D., M.D., formerly Professor of Clinical Surgery ; 12 Park Crescent, Portland Place, London, W.

Aeneas James George Mackay, LL.D., Advocate, formerly Professor of History ; 7 Albyn Place, Edinburgh.

George Walter Prothero, LL.D., Editor of *The Quarterly Review*, formerly Professor of History ; 24 Bedford Square, London, W.C.

John Philp Wood, LL.D., W.S., formerly Professor of Conveyancing ; 16 Buckingham Terrace, Edinburgh.

#### IV.—UNIVERSITY LECTURERS.

Andrew P. Aitken, D.Sc., 38 Garscube Terrace.

Colonel F. Bailey, R.E., 7 Drummond Place.

Henry Barker, M.A., 18 Bruntsfield Gardens.

J. Beard, D.Sc., Ph.D., 93 Comely Bank Avenue.

James Martin Beattie, M.B., C.M., 38 Warrender Park Road.

George A. Berry, M.B., C.M., 31 Drumsheugh Gardens.

A. W. Borthwick, B.Sc., Royal Botanic Gardens.

Archibald Brown Clark, 2 Woodburn Place.

Thomas S. Clouston, M.D., Tipperlinn House, Morningside Place.

H. J. Cunningham, B.A., University.

Andrew Davidson, M.D., 29 Morningside Drive.

Leonard Dobbin, Ph.D., 7 Cobden Road.

John Downie Falconer, M.A., B.Sc., University.

William Fream, LL.D., B.Sc., The Vinery, Downton, Salisbury.

Robert P. Hardie, M.A., 13 Palmerston Road.

David Playfair Heatley, Spring Valley, Morningside.

David Hepburn, M.D., 11 Glenorchy Terrace.

Professor William James, of Harvard University, Cambridge, Massachusetts, U.S.A. (Gifford Lecturer in Natural Theology).

William Allan Jamieson, M.D., 35 Charlotte Square.

Neil J. D. Kennedy, M.A., 46 Northumberland Street.

Walter Hume Kerr, M.A., B.Sc., Ferniehurst, Juniper Green.

Cargill G. Knott, M.A., D.Sc., 42 Upper Gray Street.

Peter M'Bride, M.D., C.M., 16 Chester Street.

Alexander W. Mair, M.A., 34 Gillespie Crescent.

Hugh Marshall, D.Sc., 12 Lonsdale Terrace.

James Mill, M.A., 12 Howard Place.

Thomas Hugh Milroy, M.D., 57 Inverleith Row.

Thomas Monck Burn Murdoch, M.B., 14 Charlotte Square.

William Peddie, D.Sc., 14 Ramsay Garden.

Charles Sarolea, Ph.D., D.Litt., l'Ermitage, Colinton, Edinburgh.

Otto Schlapp, Ph.D., Tusculum House, Fisherrow, Musselburgh.

William Cameron Sillar, M.B., B.Sc., 46 George Square.

G. Gregory Smith, M.A., 16 Murrayfield Avenue.

Charles Tweedie, M.A., B.Sc., 15 Dalrymple Crescent.

# University Officers.

Date of Institution.	Chancellor.	Appointed
1859.	RIGHT HON. ARTHUR JAMES BALFOUR, M.P., D.C.L., LL.D. ....	1891

## Vice-Chancellor.

1859.	SIR WILLIAM MUIR, K.C.S.I., D.C.L., LL.D., Ph.D. ....	1885
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## Rector.

1859.	THE MOST HON. THE MARQUESS OF DUFFERIN AND AVA, G.C.S.I., D.C.L., LL.D., &c. ....	1899
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## Principal.

1852.	SIR WILLIAM MUIR, K.C.S.I., D.C.L., LL.D., Ph.D. ....	1885
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## Representative in Parliament.

1868.	SIR JOHN BATTY TUKE, M.D., F.R.C.P.E. ....	1900
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## University Court.

**President**—THE RECTOR, *Ex officio*.

THE PRINCIPAL .....	<i>Ex officio</i> .		
RT. HON. THE LORD PROVOST of Edinburgh .....	} <i>Ex officio</i> .		
ÆNEAS J. G. MACKAY, LL.D., Advocate .....		Assessor, nominated by Chancellor ...	1891
DAVID DUNDAS, K.C. ....	Do.	nominated by Rector .....	1900
ANDREW MITCHELL, Advocate.	Do.	elected by Town Council..	1897
PATRICK HERON WATSON, } M.D., LL.D. ....	Do.	elected by General Council	1887
J. HOPE FINLAY, W.S. ....	Do.	do.	1893
A. TAYLOR INNES, M.A., Advocate.	Do.	do.	1893
JOSEPH BELL, M.D. ....	Do.	do.	1895
SIR WM. TURNER, K.C.B., M.B., } D.C.L., LL.D., Professor of Anatomy	Do.	elected by Senatus ...	1889
ALEXANDER CRUM BROWN, } M.D., D.Sc., Professor of Chemistry	Do.	do.	1889
SIMON S. LAURIE, LL.D., Pro- } fessor of Education .....	Do.	do.	1898
JOHN RANKINE, K.C., M.A., } LL.D., Professor of Scots Law .....	Do.	do.	1901

**Secretary**—PROFESSOR TAYLOR, D.D.

**Factor and Law Agent**—HENRY COOK, W.S.

**Auditor**—THOMAS GOLDIE DICKSON, C.A.

**Clerk**—THOMAS GILBERT.

**Assistant Clerk**—JAMES DOWIE.

**Secretary's Clerk**—GEORGE CAMPBELL.

**Curators of Patronage.**

		Appointed.
PRINCIPAL SIR WILLIAM MUIR	Elected by University Court ....	1887
THE HON. LORD STORMONTH DARLING.....	Elected by do. ....	1900
PATRICK HERON WATSON, M.D., LL.D. ....	Elected by do. ....	1891
JAMES STEEL, Lord Provost.....	Elected by Town Council ....	1901
LT.-COL. ALEX. FORBES MACKAY..	Elected by do. ....	1898
TREASURER CRANSTON.....	Elected by do. ....	1901
SIR ANDREW M'DONALD.....	Elected by do. ....	1900
Secretary—R. HERBERT JOHNSTON, W.S., 4 Albyn Place.		

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**Senatus Academicus.****President**—THE PRINCIPAL.**Secretary**—Professor Sir LUDOVIC GRANT, Bart., B.A.**FACULTY OF ARTS.****Dean**—Professor CHRYSTAL, LL.D.

Date of Institution.	Chairs.	Professors.	Appointed.	Patrons.
1760	Rhetoric and English Literature	GEO. SAINTSBURY, M.A., LL.D.	1895	Crown.
1583	Humanity.....	WILLIAM ROSS HARDIE, M.A.	1895	{ Lds. of Ses., Cur., Fac. of Adv., and W.S. Soc. <sup>1</sup>
1583	Greek.....	SAMUEL HENRY BUTCHER, LL.D., Litt.D.	1882	
1642	Hebrew and Semitic Languages	ARCH. ROBT. STIRLING KENNEDY, B.D., D.D.	1895	Curators.
1862	Sanskrit and Comparative Philology <sup>2</sup>	JULIUS EGGELENG, Ph.D.	1875	Crown.
1882	Celtic Languages, Literature, History, and Antiquities <sup>3</sup>	DON. MACKINNON, M.A.	1882	Curators.
1583	Mathematics.....	GEO. CHRYSTAL, LL.D...	1879	Curators.
1583	Natural Philosophy...		1901	Curators.
1583	Logic & Metaphysics.	A. S. PRINGLE PATTISON, M.A., LL.D.	1891	Curators.
1583	Moral Philosophy.....	JAMES SETH, M.A.....	1898	Curators.
1719	History .....	JOHN KIRKPATRICK, LL.B., LL.D.	1881	Fac. of Adv., & Cur.
1893	History .....	RICHARD LODGE, M.A.	1899	University Court.
1871	Commercial & Political Economy & Mercantile Law <sup>4</sup>	JOSEPH SHIELD NICHOLSON, M.A., D.Sc.	1880	Cur., & Merch. Co.

<sup>1</sup> The Judges of the Court of Session nominate two Delegates, the Curators two, the Faculty of Advocates one, and the Society of Writers to the Signet one. These Delegates appoint the Professor, who receives his Commission from the Curators.

<sup>2</sup> This Chair was originally endowed by John Muir, LL.D. (Edin.), D.C.L. (Oxon.), of the Bengal Civil Service, and by a Parliamentary vote.

<sup>3</sup> Originally endowed, 1882, with a sum of £14,000, raised by public subscription.

<sup>4</sup> This Chair was endowed in 1871 by the Merchant Company of Edinburgh, and other Governors of George Watson's and Daniel Stewart's Hospitals.



Date of Institution.	Chairs.	Professors.	Appointed.	Patrons.
1879	<b>Fine Art</b> <sup>1</sup> (Watson Gordon Chair).....	GERARD BROWN, M.A.	BALDWIN 1880	Univ. Ct., Pres. R. Scott. Acad.
1876	<b>Theory, History, and Practice of Education</b> <sup>2</sup>	SIMON LAURIE, LL.D.	SOMERVILLE 1876	

FACULTY OF SCIENCE.

Dean—Professor GEIKIE, D.C.L., LL.D.

1583	<b>Mathematics</b> .....	GEORGE M.A., LL.D.	CHRYSTAL 1879	Curators.
1583	<b>Natural Philosophy.</b>		1901	Curators.
1786	<b>Astronomy</b> .....	RALPH COPELAND, Ph.D.	1889	Crown.
1713	<b>Chemistry</b> .....	ALEX. CRUM BROWN, M.D., D.Sc.	1869	Curators.
1767	<b>Natural History</b> .....	JAMES COSSAR M.D.	EWART, 1882	Curators.
1676	<b>Botany</b> .....	ISAAC BAYLEY BALFOUR, M.D., D.Sc.	1888	Crown.
1705	<b>Anatomy</b> .....	Sir WILLIAM TURNER, K.C.B., M.B., D.C.L., LL.D.	1867	Curators.
1685	<b>Physiology</b> .....	EDW. ALBERT SCHÄFER, F.R.S.	1899	Curators.
1871	<b>Geology</b> <sup>3</sup> .....	JAMES GEIKIE, D.C.L., LL.D.	1882	Crown.
1868	<b>Engineering</b> <sup>4</sup> .....	THOS. HUDSON BEARE, B.A., B.Sc., M. Inst. C.E.	1901	Crown.
1799	<b>Agriculture &amp; Rural Economy</b> <sup>5</sup>	ROBERT WALLACE.....	1885	Lds. of Sess., Cur. & Univ. Ct.
1893	<b>Public Health</b> <sup>6</sup> .....	CHAS. HUNTER STEWART, M.B., C.M., D.Sc.	1893	Univ. Court.

FACULTY OF DIVINITY.

Dean—Professor PATRICK, D.D.

1583	<b>Divinity</b> .....	ROBERT FLINT, D.D.....	1876	Curators.
1546	<b>Biblical Criticism &amp; Biblical Antiquities</b>	JOHN PATRICK, D.D.....	1898	Crown.
1694	<b>Ecclesiastical History</b>	MALCOLM CAMPBELL, TAYLOR, D.D.	1877	Crown.
1642	<b>Hebrew and Semitic Languages</b>	ARCHD. ROBT. STIRLING KENNEDY, B.D., D.D.	1895	Curators.

FACULTY OF LAW.

Dean—Professor Sir LUDOVIC GRANT, Bart., B.A.

1707	<b>Public Law</b> .....	Sir LUDOVIC GRANT, Bart., B.A.	1890	Crown.
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<sup>1</sup> This Chair was endowed by Mr H. G. and Miss Frances Watson.

<sup>2</sup> This Chair was originally endowed by the Trustees of the late Rev. Dr Andrew Bell, and supplemented from the Educational Endowments Commission.

<sup>3</sup> This Chair was originally endowed by Sir Roderick Impey Murchison, Bart.

<sup>4</sup> This Chair was originally endowed by Sir David Baxter.

<sup>5</sup> The Professor is elected by nine Delegates, three chosen by the Judges of the Court of Session, three by the Curators, and three by the University Court.

<sup>6</sup> This Chair, "The Bruce and John Usher Chair of Public Health," was endowed by legacy of £5000 from the late Alexander Low Bruce, Esq.; donations of £1163 from Mrs A. L. Bruce and other members of the Bruce family; £2000 from John Usher, Esq. of Norton; and £1000 from Messrs William Younger & Co.

Date of Institution.	Chairs.	Professors.	Appointed.	Patrons.
1710	Civil Law.....	JAS. MACKINTOSH, B.A.	1893	{ Fac. of Adv., and Cur. <sup>1</sup> Do. <sup>1</sup>
1719	History (Constitutional, etc.)	JOHN KIRKPATRICK, LL.B., LL.D.	1881	
1722	Scots Law.....	JOHN RANKINE, K.C., LL.D.	1888	Do. <sup>1</sup>
1807	Forensic Medicine....	SIR HENRY DUNCAN LITTLEJOHN, M.D., LL.D.	1897	Crown.
1825	Conveyancing <sup>2</sup> .....	JOHN LITTLE MOUNSEY, W.S.	1900	{ Cur., Dep.-Kpr. and W.S. Soc. <sup>3</sup> Cur., & Merch. Co.
1871	Commercial and Political Economy and Mercantile Law	JOSEPH SHIELD NICHOLSON, M.A., D.Sc.	1880	

## FACULTY OF MEDICINE.

Dean—Professor SIMPSON, M.D.

1713	Chemistry.....	ALEX. CRUM BROWN, M.D.	1869	Curators.
1767	Natural History.....	JAMES COSSAR EWART, M.D.	1882	Crown.
1676	Botany.....	BAYLEY BALFOUR, M.D.	1888	Curators.
1705	Anatomy.....	Sir WM. TURNER, K.C.B., M.B.	1867	Curators.
1685	Physiology.....	EDW. ALBERT SCHÄFER, F.R.S.	1899	Curators.
1831	Pathology.....	WILLIAM SMITH GREENFIELD, M.D.	1881	Curators.
1768	Materia Medica.....	THOMAS RICHARD FRASER, M.D.	1877	Curators.
1685	Medicine.....	JOHN WYLLIE, M.D.	1900	Curators.
1831	Surgery.....	JOHN CHIENE, C.B., M.D.	1882	Curators.
1726	Midwifery.....	ALEX. RUSSELL SIMPSON, M.D.	1870	Curators.
1807	Forensic Medicine....	SIR HENRY DUNCAN LITTLEJOHN, M.D.	1897	Crown.
1803	Clinical Surgery.....	THOS. ANNANDALE, M.D.	1877	Crown.
1741	Clinical Medicine.....	THOMAS RICHARD FRASER, M.D.; WILLIAM SMITH GREENFIELD, M.D.; and JOHN WYLLIE, M.D.; Diseases of Women — ALEXANDER RUSSELL SIMPSON, M.D.		
1898	Public Health <sup>4</sup> .....	CHARLES HUNTER STEWART, M.B., CM., D.Sc.	1898	Univ. Court.

## FACULTY OF MUSIC.

Dean—Professor NIECKS, Mus. D., The PRINCIPAL, *ex officio*.

Professor KIRKPATRICK, appointed by the Senatus.

1839	Reid Chair of Music..	FRED. NIECKS, Mus. D.	1891	University Court
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## UNIVERSITY LECTURERS.

Subjects.	Lecturers.		
1892 Rhet. and English Lit.	G. GREGORY SMITH, M.A.	1892	University Court.
1892 Latin .....	JAMES MILL, M.A.	1896	Do.
1892 Greek .....	ALEX. W. MAIR, M.A.	1899	Do.

<sup>1</sup> For each of these Chairs the Faculty of Advocates send to the Curators a list of two, of whom the Curators must choose one.

<sup>2</sup> Endowed by the Society of Writers to the Signet.

<sup>3</sup> The Election is by—(1) Two Delegates from the Curators; (2) Two from the Society of Writers to the Signet; and (3) The Deputy-Keeper of the Signet.

<sup>4</sup> See footnote 6, page 3.

Date of Institution.	Subjects.	Lecturers.	Appointed.	Patrons.
1901	Ancient History.....	H. J. CUNNINGHAM, B.A.	1901	University Court.
1892	Mathematics .....	CHARLES TWEEDIE, M.A., B.Sc.	1892	Do.
1892	Natural Philosophy	WILLIAM PEDDIE, D.Sc.	1892	Do.
1892	Applied Mathematics	CARGILL G. KNOTT, M.A., D.Sc.	1892	Do.
1892	Logic & Metaphysics	ROBERT P. HARDIE, M.A.	1892	Do.
1892	Moral Philosophy.....	HENRY BARKER, M.A.	1898	Do.
1894	French Lang., Lit., and Romance Philology	CHARLES SAROLEA, Ph.D., D.Litt.	1894	Do.
1894	German Lang., Lit., and Teutonic Philology	OTTO SCHLAPP, Ph.D.	1894	Do.
1900	History.....	DAVID PLAYFAIR HEATLEY	1900	Do.
1901	Economics .....	ARCH. BROWN CLARK, M.A.	1901	Do.
1894	Chemical Theory.....	LEONARD DOBBIN, Ph.D.	1894	Do.
1894	Plant Physiology.....	A. W. BORTHWICK, B.Sc.	1898	Do.
1894	Mineralogy and Crystallography	HUGH MARSHALL, D.Sc.	1894	Do.
1894	Petrology .....	JOHN DOWNIE FALCONER, M.A., B.Sc.	1901	Do.
1894	Advanced Physiology	T. H. MILROY, M.D., B.Sc.	1899	Do.
1894	Physiological Chemistry			
1895	Geometrical and Mechanical Drawing	WALTER HUME KERR, M.A., B.Sc.	1895	Do.
1894	Agricultural Chemistry	A. P. AITKEN, D.Sc.	1894	Do.
1889	Forestry .....	Colonel F. BAILEY, R.E.	1892	Do.
1890	Agricultural Entomology	WILLIAM FREEMAN, LL.D., B.Sc.	1891	Do.
1887	Gifford Lecturer on Natural Theology	Professor WILLIAM JAMES of Harvard University	1893	Do.
1889	Gunning Lecturer.....		1899	Do.
1894	International Private Law	N. J. D. KENNEDY, M.A.	1899	Do.
1884	Procedure & Evidence		1893	Do.
1879	Mental Diseases.....	THOS. S. CLOUSTON, M.D.	1879	Do.
1883	Diseases of the Eye....	GEO. A. BERRY, M.B., C.M.	1896	Do.
1885	Clinical Instruction on Diseases of Children	T. M. BURN MURDOCH, M.B., and staff of the Royal Hospital for Sick Children.	1889	Do.
1885	Embryology and Vertebrate Zoology	JOHN BEARD, D.Sc.	1894	Do.
1894	Regional Anatomy ....	DAVID HEPBURN, M.D.	1894	Do.
1894	Experimental Pharmacology	WILLIAM C. SILLAR, M.B., B.Sc.	1894	Do.
1894	Pathological Bacteriology	JAMES MARTIN BEATTIE, M.B., C.M.	1901	Do.
1897	Diseases of the Larynx, Ear, and Nose	PETER M'BRIDE, M.D.	1897	Do.
1898	Diseases of Tropical Climates	ANDW. DAVIDSON, M.D.	1899	Do.
1899	Clinical Instruction on Diseases of the Skin	W. ALLAN JAMIESON, M.D.	1899	Do.
1901	Invertebrate Zoology	J. H. ASHWORTH, D.Sc.	1901	Do.

## UNIVERSITY ASSISTANTS.

## IN THE FACULTY OF ARTS.

Subjects.	Assistants.
Rhetoric and Eng. Liter. ....	G. GREGORY SMITH, M.A.
Humanity .....	JAMES MILL, M.A.
Greek .....	ALEXANDER W. MAIR, M.A.
Hebrew and Semitic Languages	
Mathematics .....	CHARLES TWEEDIE, M.A., B.Sc.
Natural Philosophy .....	WILLIAM PEDDIE, D.Sc.
Do. (Mechanical) ..	THOMAS LINDSAY.
Do. under Nichol	} W. GENTLE.
Foundation	
Logic and Metaphysics .....	R. P. HARDIE, M.A.
Moral Philosophy .....	HENRY BARKER, M.A.
History .....	D. P. HEATLEY.
Political Economy, &c. ....	ARCHIBALD B. CLARK, M.A.

## IN THE FACULTY OF SCIENCE.

Geology .....	JOHN D. FALCONER, M.A., B.Sc.
Engineering .....	W. H. KERR, M.A., B.Sc.
Do. Demonstrator	GEORGE WILSON.

## IN THE FACULTY OF DIVINITY.

Divinity .....	Rev. ALEXANDER HORN, B.D.
Hebrew and Semitic Languages	

## IN THE FACULTY OF LAW.

Civil Law .....	J. M. IRVINE, M.A., B.Sc., LL.B.
Scots Law .....	W. M. GLOAG, B.A.
Conveyancing .....	JOHN M. VALLANCE.
Constitutional Law and History	D. P. HEATLEY.

## IN THE FACULTY OF MEDICINE.

Chemistry .....	LEONARD DOBBIN, Ph.D.; HUGH MARSHALL, D.Sc.; WILLIAM WHITE TAYLOR, M.A., D.Sc.; J. P. LONGSTAFF; JAMES KERR, B.Sc.
Zoology .....	J. BEARD, D.Sc.; J. H. ASHWORTH, D.Sc.
Botany .....	L. LEWTON-BRAINE and A. W. BORTHWICK, B.Sc.
Anatomy .....	DAVID HEPBURN, M.D.; DAVID WATERSTON, M.B., C.M.; EDWARD B. JAMIESON, M.B., C.M.; ALEXANDER FREW, M.B., C.M.
Physiology .....	T. H. MILROY, M.D., B.Sc.; P. T. HERRING, M.D.; JOHN MALCOLM, M.B.; and SUTHERLAND SIMPSON, B.Sc., M.B.
Pathology .....	J. M. BEATTIE, M.B., and GEORGE LYON, M.B., Ch.B.
Materia Medica .....	WM. C. SILLAR, M.B., C.M., B.Sc., and D. B. WATERS, M.B., Ch.B.
Medicine .....	J. GIBSON CATTANACH, M.B., C.M.
Clinical Medicine Tutors ..	J. G. CATTANACH, M.B., C.M.; GEORGE LYON, M.B., Ch.B.; EDWIN MATTHEW, M.B., Ch.B.; and G. F. BARBOUR SIMPSON, M.B., for Diseases of Women.
Surgery .....	JOHN STEVENSON, M.B., C.M.; GEORGE L. CHIENE, M.B., C.M.
Midwifery .....	G. F. BARBOUR SIMPSON, M.B.
Forensic Medicine .....	T. W. DRINKWATER, Ph.D.
Public Health .....	J. BUCHANAN YOUNG, M.B., D.Sc.
Clinical Surgery Tutor .....	R. BLACK PURVES, M.B., C.M.

# EXAMINERS.

## FOR PRELIMINARY EXAMINATION.

The Professors of or Lecturers on the several subjects, and the following additional Examiners:—

Subjects.	Examiners.	Appointed.	Patrons.
English.....	OLIVER ELTON, B.A.	1898	University Court.
Latin }.....	F. R. JAMIESON, M.A.	1898	Do.
Greek }.....			
Mathematics.....	JAMES GOODWILLIE, M.A., B.Sc.	1898	Do.
French.....	LOUIS BARBÉ.....	1900	Do.
German.....	GEORGE B. GARDINER, M.A., D.Sc.	1900	Do.
Italian.....			
Dynamics.....	JAMES GOODWILLIE, M.A., B.Sc.	1898	Do.

## FOR DEGREES, &c.

### I.—IN THE FACULTY OF ARTS.

The Professors of or Lecturers on the several Subjects, and the following additional Examiners:—

#### I. LANGUAGE AND LITERATURE.

Subjects.	Examiners.	Appointed.	Patrons.
Latin.....	F. R. JAMIESON, M.A. and	1898	University Ct.
Greek.....	Prof. E. A. SONNENSCHNIG }.....		
English.....	OLIVER ELTON, B.A.....	1898	Do.
French.....	LOUIS BARBÉ.....	1900	Do.
German.....	GEORGE B. GARDINER, M.A., D.Sc.	1900	Do.
Sanskrit.....	Dr RUDOLPH HOERNLE, M.A.	1900	Do.
Hebrew and Semitic Languages.....	W. B. STEVENSON, M.A., B.D.	1899	Do.
Classical Archæology.....	Professor ERNEST GARDNER.	1897	Do.
Celtic.....	GEORGE HENDERSON, M.A., Ph.D.	1900	Do.

#### 2. MENTAL PHILOSOPHY.

Logic and Metaphysics.....	CHAS. M. DOUGLAS, M.A., D.Sc.	1899	Do.
Moral Philosophy.....			
Political Economy.....	J. ROBERTSON CHRISTIE, LL.B.	1900	Do.
Education.....	STEWART A. ROBERTSON, M.A.	1900	Do.
Philosophy of Law....	J. S. TAYLOR CAMERON, LL.B.	1899	Do.

#### 3. SCIENCE.

Mathematics.....	JAMES GOODWILLIE, M.A., B.Sc.	1898	Do.
Natural Philosophy.....			
Astronomy.....	J. L. E. DREYER, Ph.D.....	1900	Do.
Chemistry.....	JOHN GIBSON, Ph.D.....	1901	Do.
Zoology.....	J. R. AINSWORTH DAVIS, M.A.	1899	Do.
Botany.....	J. B. FARMER, M.A.....	1901	Do.
Geology.....	B. N. PEACH, F.R.S.....	1900	Do.

#### 4. HISTORY AND LAW.

History.....	P. H. BROWN, M.A., LL.D.	1900	Do.
Archæology and Art (History of).....	JOHN M. VALLANCE.....	1901	Do.
Constitutional Law and History.....	J. S. TAYLOR CAMERON, LL.B.	1899	Do.
Roman Law.....			
Public Law.....			



## II.—SCIENCE.

### 1. PURE SCIENCE.

The Professors of and Lecturers on the several subjects, and the additional Examiners in Mathematics, Natural Philosophy, Zoology, Botany, Chemistry, Astronomy, Anatomy, Physiology, and Geology.

### 2. ENGINEERING.

The Professors of and Lecturers on the several subjects, the additional Examiners in Mathematics, Natural Philosophy, and Chemistry, and in  
**Engineering**..... DAVID M. WESTLAND, C.E. 1897 University Court.

### 3. PUBLIC HEALTH.

The Professors of and Lecturers on the several subjects, and the following additional Examiners:—

Subjects.	Examiners.	Appointed.	Patrons.
<b>Physics</b> .....	JAMES GOODWILLIE, M.A., B.Sc.	1898	University Court.
<b>Laboratory Work</b> .....	A. MACFADYEN, M.D., B.Sc.	1901	Do.
<b>Medicine in its bearings on Public Health</b> .....	J. O. AFFLECK, M.D.....	1900	Do.
<b>Sanitation, Sanitary Law, and Vital Statistics</b> .....	JOHN C. M'VAIL, M.D...	1901	Do.

### 4. AGRICULTURE.

The Professors of and Lecturers on the several subjects, and the following additional Examiners:—

The additional Examiners in Mathematics, Chemistry, Botany, Natural History, Geology, and Political Economy, and in			
<b>Agriculture</b> .....	JAMES S. GORDON B.Sc.	1900	University Court.
<b>Veterinary Hygiene</b> .....	R. RUTHERFORD, F.R.C.V.S.	1898	Do.
<b>Chemistry as applied to Agriculture</b> .....	JOHN A. MURRAY, B.Sc.	1896	Do.
<b>Political Economy</b> .....	J. ROBERTON CHRISTIE, LL.B.	1900	Do.
<b>Forestry</b> .....	Dr JOHN NISBET.....	1900	Do.
<b>Agricultural Entomology</b>	R. STEWART MAC- DOUGALL, M.A., D.Sc.	1899	Do.

## III.—IN THE FACULTY OF DIVINITY.

The Professors in the Faculty of Divinity, and the following additional Examiners:—  
ALEXANDER S. MARTIN, M.A., B.D..... 1899 University Court.  
WILLIAM B. STEVENSON, M.A., B.D..... 1899 Do.

## IV.—IN THE FACULTY OF LAW.

The Professors of, and Lecturers on, the several subjects, and the following additional Examiners:—

<b>Scots Law, International Private Law, Convey- ancing, and Forensic Medicine</b> .....	JAMES A. HOPE, LL.B.	1899	University Court.
<b>Roman, Public, Interna- tional, and Constitu- tional Law, and General Jurisprudence</b> .....	J. S. TAYLOR CAMERON, LL.B.	1899	Do.
<b>Political Economy</b> .....	J. ROBERTON CHRISTIE, LL.B.	1900	Do.

## V.—IN THE FACULTY OF MEDICINE.

The Professors in the Faculty of Medicine, and the following additional Examiners:—  
**Botany**..... J. BRETLAND FARMER, M.A... 1901 University Court.  
**Zoology**.. J. R. AINSWORTH DAVIS, 1899 Do.  
M.A.

Subjects.	Examiners.	Appointed.	Patrons.
Physics .....	JAS. GOODWILLIE, M.A., B.Sc.	1898	University Court.
Chemistry .....	JOHN GIBSON, Ph.D.	1901	Do.
Anatomy .....	ROBT. HOWDEN, M.A., M.D.	1901	Do.
Physiology .....	D. NOËL PATON, M.D., B.Sc.	1901	Do.
Materia Medica .....	CHAS. O. HAWTHORNE, M.D.	1900	Do.
Pathology .....	WILLIAM RUSSELL, M.D.	1901	Do.
Forensic Medicine .....	JOHN C. M'VAIL, M.D.	1901	Do.
Public Health .....			
Surgery .....	JOHN SHAW M'LAREN, M.B.	1901	Do.
Clinical Surgery .....	ALEX. GORDON MILLER, M.D.	1898	Do.
	C. W. MACGILLIVRAY, M.D.	1900	Do.
	JOHN BARLOW, M.D.	1900	Do.
Medicine .....	JAMES O. AFFLECK, M.D.	1901	Do.
Clinical Medicine .....	ALEXANDER JAMES, M.D.	1901	Do.
Midwifery .....	JOHN W. BALLANTYNE, M.D.	1901	Do.

## VI.—IN THE FACULTY OF MUSIC.

The Professor of Music and Sir ALEXANDER C. MACKENZIE, Mus. D.

### FOR SCHOOLMASTER'S DIPLOMA.

The Professor of Education and STEWART A. ROBERTSON, M.A. 1900.

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University Librarian.—Vacant.

Assistant Librarians.—ALEXANDER ANDERSON; DAVID CUTHBERTSON; CHAS. MARTIN; WILLIAM WRIGHT; EDMOND MURISSET; GLADSTONE BRUCE; JAMES H. S. GREGORY, at *University New Buildings*.

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Organist.—THOMAS H. COLLINSON, Mus. B.

—o—

## KEEPERS OF MUSEUMS.

Anatomical Museum .....	Professor Sir WM. TURNER, K.C.B.
Do. Assistant Keeper .....	ALEX. M. OSLER.
Museum of Natural History .....	Professor EWART.
—o—	
Clerk of Senatus .....	THOMAS GILBERT.
Assistant Clerks .....	{ JAMES DOWIE, JOHN STIRTON, THOMAS F. HARLEY.
Clerk of Works .....	ALLAN E. L. CLARK.
Janitor and Mace-Bearer .....	JAMES TWEEDDALE.
Warders .....	JAMES DONALDSON, WILLIAM MURRAY.
Caretaker, Music Class Room .....	C. W. WELBY.
Caretaker, M'Ewan Hall .....	BRYCE STRUTHERS.

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## GENERAL COUNCIL.

President .....	{ The Right Hon. ARTHUR JAMES BALFOUR, M.P., D.C.L., &c., Chancellor of the University.
Vice-Presidents .....	The Rector, The Principal, The Chancellor's Assessor, The Rector's Assessor.
Representative in Parliament .....	Sir JOHN BATTY TUKE, M.D., F.R.C.P.E.
Convener of Business Committee .....	J. CAMPBELL LORIMER, LL.B., Advocate.
Convener of Finance Committee .....	DAVID D. BUCHAN, LL.B., S.S.C.
Secretary and Registrar .....	THOMAS GILBERT.

# Constitution of the University.

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**T**HE University of Edinburgh was originally the "College of Edinburgh" or "The Town's College," founded in 1583 by the Town Council of Edinburgh, under general powers granted by the Charter of King James VI., dated 14th April 1582. No Charter of foundation is extant; but from the first the College possessed the privilege of conferring degrees. This privilege was ratified by the "Act of Confirmation," passed in 1621, which secured to the "College of James VI." (as it had come to be called) all the rights, immunities, and privileges enjoyed by the Universities of Scotland. This ratification was renewed in the Treaty of Union between England and Scotland, and in the Act of Security. Gradually, in Acts of General Assembly, of Town Council, and of Parliament, the "College of James VI." came to be styled "The University of Edinburgh"; but it remained under the control and patronage of the Town Council down to 1858, when, by the Universities Act, all the Universities of Scotland received new and autonomous constitutions.

The University is a Corporation consisting of the Chancellor, Rector, Principal, Professors, Registered Graduates and Alumni, and Matriculated Students; and from 1858 to 1890 its government was vested in the *Senatus Academicus* (consisting of the Principal and the Professors), subject to the review and control of the University Court.

By the Universities (Scotland) Act 1889, the University Court was constituted a body corporate, to which the whole property belonging to the University at the passing of the Act was transferred, with full power of administration.

The *Senatus*, as heretofore, regulates the teaching and discipline of the University, subject to the provisions of the Universities Acts of 1858 and 1889.

## CHANCELLOR.

The Chancellor is elected by the General Council for life. Changes in the ordinances and in University arrangements, proposed or approved by the University Court, must receive his

sanction. Degrees are conferred by him, or by the Vice-Chancellor. The Chancellor is President of the General Council, and nominates an Assessor in the University Court. Appointments:—

Right Hon. Lord Brougham, 1859.

Right Hon. John Inglis, D.C.L., LL.D., 1868.

Right Hon. ARTHUR J. BALFOUR, M.P., D.C.L., LL.D., &c., 1891.

### VICE-CHANCELLOR.

The Vice-Chancellor, nominated by the Chancellor, may, in absence of the Chancellor, confer Degrees, but cannot discharge any other of the Chancellor's duties. In the Vice-Chancellor's absence Degrees are conferred by the Principal, or by the senior member of Senatus.

The Vice-Chancellor acts as Returning Officer at Parliamentary Elections. If there be no Vice-Chancellor at the time, the University Court appoints one to act as Returning Officer.

Appointments:—

Sir D. Brewster, appointed 1860.	Sir WILLIAM MUIR, K.C.S.I.,
Sir Alexander Grant, Bart., 1868.	D.C.L., &c., 1885.

### RECTOR.

The Rector is elected by the Matriculated Students in the University on such day in October or November as may be fixed by the University Court after consultation with the Senatus, but not later than the second Saturday in November. The term of office is three years. The next election will take place in November 1902. The Rector is President of, and nominates an Assessor in, the University Court. He may, before he appoints his Assessor, confer with the Students' Representative Council. No Principal or Professor of any Scottish University is eligible. Appointments:—

Rt. Hon. W. E. Gladstone, 1859.	Most Hon. the Marquess of Lothian,
Thomas Carlyle, 1865.	1887.
Rt. Hon. Lord Moncreiff, 1868.	Rt. Hon. George J. Goschen, 1890.
Sir W. Stirling Maxwell, Bt., 1871.	Rt. Hon. J. P. B. Robertson, 1893.
Rt. Hon. Earl of Derby, 1874.	Rt. Hon. Lord Balfour of Burleigh,
Most Hon. the Marquess of Har-	1896.
tington, 1877.	Most Hon. the Marquess of DUF-
Rt. Hon. Earl of Rosebery, 1880.	FERIN AND AYA, 1899.
Rt. Hon. Earl of Iddesleigh, 1883.	

## REPRESENTATIVE IN PARLIAMENT.

Under Clauses 27 to 41 of the "Representation of the People (Scotland) Act," 31 & 32 Vict., cap. 48, the General Councils of the Universities of Edinburgh and St Andrews elect a Member of Parliament for these Universities.

When a poll is demanded, the votes are given by voting papers issued by the Registrar.

The appointments have been—

Sir Lyon, afterwards Lord, Playfair, K.C.B., LL.D., 1868.

Rt. Hon. J. H. A. Macdonald, C.B., Q.C., LL.D., 1885, 1886.

M. T. Stormonth Darling, Q.C., 1888.

Rt. Hon. Sir Charles J. Pearson, Q.C., LL.D., 1890, 1892.

Sir William Overend Priestley, K.B., M.D., LL.D., 1896.

Sir JOHN BATTY TUKE, M.D., F.R.C.P.E., 1900.

The Parliamentary constituency for 1901 is as follows :—

Edinburgh.....	8,883
St Andrews.....	1,471

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Total in 1901.....10,354

## UNIVERSITY COURT.

Under the Universities Act 1858, the Court has power :—

1. To review all decisions of the Senatus, and to be a Court of Appeal from the Senatus, except as otherwise provided in the Universities Act.
2. To effect improvements in the internal arrangements of the University, after due communication with the Senatus, and with the sanction of the Chancellor; provided all such proposed improvements be submitted to the General Council for consideration.
3. To require due attention on the part of the Professors to the Regulations as to the mode of teaching and other duties imposed on the Professors.
4. To fix and regulate, from time to time, the Fees in the several Classes.
5. Upon sufficient cause shewn, and after due investigation, to censure any member of the Senatus, or to suspend him from office, and from the emoluments thereof, in whole or in part, for any period not exceeding one year, or to require him to retire on a retiring allowance, or to deprive him of office; and during the suspension of any Professor, to make provision for the teaching of his class: provided no such sentence of censure, suspension, deprivation, etc., shall have effect until approved by Her Majesty in Council.

By Sec. xix. any of the Rules and Ordinances enacted by the Universities Commissioners under the Act, may be altered or revoked by the University Court of the University to which they are applicable, but only with the written consent of the Chancellor, and with the approval of His Majesty in Council.



By the Universities (Scotland) Act 1889, the University Court is a body corporate with perpetual succession and a common seal; and all the property belonging to the University at the passing of the Act is now vested in that body.

By the same Act, the University Court, besides the powers conferred upon it by the Act of 1858, has power—

- (1.) To administer and manage the whole revenue and property of the University, including funds mortified for bursaries and other purposes, and have all the powers necessary for the purpose.
- (2.) To review any decision of the Senatus appealed against by a member of Senatus, or other member of the University having an interest, and to take into consideration all representations and reports made to it by the Senatus and by the General Council.  
To review, on representation made by any of its members, or by any member of Senatus, any decision which the Senatus may come to under section seven, sub-section one, but the University Court shall not review any decision of the Senatus in a matter of discipline, except upon appeal taken either by a member of Senatus or by a member of the University directly affected.
- (4.) To appoint professors whose chairs are in the patronage of the University; to appoint examiners and lecturers; and to grant recognition to the teaching of any college or individual teacher for the purposes of graduation.
- (5.) To define, on application by any member of Senatus, the nature and limits of a professor's duties under his commission.
- (6.) To take proceedings against a principal or professor, University lecturer, assistant, recognised teacher or examiner, or other person employed in teaching or examining, without the necessity of any one not a member of the Court appearing as prosecutor, and in such proceedings to call any member of the University to give evidence, and to require the production of documents, and to institute any inquiries it may deem necessary.
- (7.) To appoint from among members of the University or others, not being members of the Senatus, one third of the members of any committee charged, by ordinance of the Commissioners, with the superintendence of any libraries or museums belonging to the University; and on representation made by any of its members, or by any member of Senatus, to review any decision which the Senatus, in the exercise of its powers, may come to in respect of the recommendations of such committee.
- (8.) To appoint committees of its own number, of not less than five members, with powers to report on any business entrusted to them by the University Court, or to carry out special instructions ordered by the Court.
- (9.) To elect the representative of the University on the General Medical Council, under the Medical Act 1886.
- (10.) After the expiration of the powers of the Commission to found new professorships, with the approval of the Universities Committee.

The University Court, by Section 21, has power to make

new ordinances, with the approval of His Majesty in Council:

- (1.) With respect to the appropriation of the sum allotted to the University by the Commissioners out of the annual grant.
- (2.) Altering or revoking ordinances framed under the Universities Act 1858, or this Act; and making new ordinances: provided that such ordinances, before being submitted to His Majesty for approval, have been communicated by the University Court to the Senatus, to the General Council, and to the University Courts of the other Universities

Meetings of the Court are held for ordinary business on the first Monday after the 11th of each month, except August and September, and on the first Monday after 19th January, if necessary, for hearing Registration Appeals. Other meetings may be called as the Court may direct. Special Meetings may be called by order of the Rector or the Principal, or by the Secretary on a requisition specifying the object, signed by at least three members of the Court.

The University Court holds the patronage of the Chair of Music; of the new Chair of History; of the Chair of Public Health; of the Chair of Fine Art, in conjunction with the President of the Royal Scottish Academy; and a share in the patronage of the Chair of Agriculture. It also elects three of the seven Curators of Patronage, and appoints the Lecturers and the Additional Examiners for Degrees.

The Court consists of—1. The Rector; 2. The Principal; 3. The Lord Provost of Edinburgh for the time being; 4. An Assessor nominated by the Chancellor; 5. An Assessor nominated by the Rector; 6. An Assessor nominated by the Lord Provost, Magistrates, and Town Council of Edinburgh; 7. Four Assessors elected by the General Council; 8. Four Assessors elected by the Senatus Academicus; 9. Representatives of affiliated Colleges, under section 15 (4) of the Act of 1889 (if any).

Seven members constitute a quorum. The Rector and his Assessor continue in office for three years; but when the Chancellor or the Rector ceases to hold office, his Assessor continues to be a member of the Court until an Assessor is nominated by the new Chancellor or Rector. The other Assessors hold office

for four years; and all Assessors are eligible for re-election. No Principal or Professor of any Scottish University is eligible as Assessor to any other person or body than the Senatus. The Rector, and in his absence the Principal, presides at meetings of the Court, and in the absence of both a chairman is elected by the meeting. The person presiding at any meeting of the Court has a deliberative vote, and also a casting vote in case of equality.

An abstract of the proceedings of the Court in 1900-1901 is given in a subsequent part of the Calendar.

The names of the present Assessors are given on page 1. The names of the Assessors before 1888 will be found in the Historical Appendix to List of University Graduates, published in 1889 (page 105). The Assessors since 1888 will be found in the various Calendars.

#### UNIVERSITIES COMMITTEE OF PRIVY COUNCIL.

The Scottish Universities Committee of the Privy Council consists of the Lord President of the Privy Council, the Secretary for Scotland; the Lord Justice-General, Lord Justice-Clerk, Lord Advocate, and the Chancellor and the Lord Rector of each of the Universities, if members of the Privy Council; one member at least of the Judicial Committee of the Privy Council; and such other member or members of the Privy Council as His Majesty may appoint.

The powers and duties of this Committee may, subject to rules or regulations passed by His Majesty in Council, be exercised and discharged by any three or more of the members, one of whom shall be a member of the Judicial Committee of the Privy Council or a Senator of the College of Justice in Scotland.

#### CURATORS OF PATRONAGE.

By the Universities Act of 1858, the patronage of seventeen Chairs, previously in the gift of the Town Council, was transferred to seven Curators—three nominated by the University Court, and four by the Town Council. The Curators also have a share in the

patronage of the Chairs of Humanity, Agriculture, Civil Law, History (and Constitutional Law), Scots Law, and Conveyancing, formerly in the gift of the Town Council, and of the Chairs of Celtic and of Political Economy, instituted after the passing of the 1858 Act. The Curators hold office for three years. The names of the present Curators are given on page 2.

## REPRESENTATIVE IN GENERAL MEDICAL COUNCIL.

Under the Medical Act of 1886, the University is entitled to elect a Member of the General Medical Council, who holds office for five years. Professor Sir William Turner was elected by the Senatus in December 1886. Under the Universities Act of 1889, the University Representative is elected by the University Court, by whom Professor Sir William Turner, K.C.B., M.B., D.C.L., LL.D., was elected in 1891, and re-elected in 1896.

## PRINCIPAL.

The Principal, formerly elected by the Town Council, now by the Curators, holds office for life. He is the President of the Senatus Academicus; in absence of the Rector, he presides at the meetings of the University Court; and in absence of the Chancellor and Rector he presides at the Statutory Meetings of the General Council, and also at the Special Meetings, except for the election of Assessors.

## PRINCIPALS ELECTED SINCE 1586.

1586. Robert Rollock, <i>previously</i> <i>Regent</i>	1716. William Wishart
1599. Henry Charteris	1730. William Hamilton
1620. Patrick Sands	1732. James Smith
1622. Robert Boyd	1736. William Wishart, <i>secundus</i>
1623. John Adamson	1754. John Gowdie
1653. Robert Leighton	1762. William Robertson
1662. William Colvill	1793. George Husband Baird
1675. Andrew Cant	1840. John Lee
1685. Alexander Monro	1859. Sir David Brewster
1690. Gilbert Rule	1868. Sir Alexander Grant, Bart.
1703. William Carstares	1885. Sir WM. MUIR, K.C.S.I.

# SENATUS ACADEMICUS.

The Principal and the Professors constitute the Senatus. This body superintends and regulates the teaching and discipline of the University. The Senatus elects four Assessors in the University Court who hold office for four years. Two retire biennially, but may be re-elected; and in case of a casual vacancy, the person elected to fill it goes out of office when the person whom he succeeded would in the ordinary rotation have retired. The Senatus appoints two-thirds of the members of the Library and the Museums Committees, receives their reports, and, subject to the review of the University Court, confirms, modifies, or rejects such reports. It also elects a representative in the General Assembly of the Church of Scotland; two Managers of the Royal Infirmary; two Governors of George Heriot's Trust; two Governors of Morrison's Academy, Crieff; two Governors of the Spence Bursary Trust; one Governor of Dollar Institution; and one Governor of Stiell's Hospital, Tranent. Degrees in Arts, Science, Divinity, Law, Medicine, and Music are conferred, on the recommendation of the Senatus, by either the Chancellor, the Vice-Chancellor, the Principal, or the senior Professor present. The Principal is President of the Senatus, with a deliberative and also a casting vote; and, in his absence, the Senior Professor present acts as Chairman, also with a double vote. The Ordinary Meetings of Senatus are held on the first Saturday after the opening of the Winter Session; the last Saturdays of November, January, February and March; the Saturday immediately preceding the Christmas vacation; the last Fridays of May, June and July; and, for conferring Degrees, in April and July on days to be fixed at the December Meeting of the Senatus of the preceding year. Extraordinary Meetings may be called by the Principal or by three Professors. One-third of the Senatus constitutes a quorum.

The Secretary of Senatus, among other duties, summons the Meetings, prepares the Minutes, and intimates business assigned to the Principal, the Faculties, the Boards of Studies, &c. He also administers the *Sponsio Academica* to Graduates.



## FACULTIES.

The University now contains six Faculties, as constituted by Ordinance in 1893—viz., Arts, Science, Divinity, Law, Medicine, and Music. Each Faculty is presided over by a Dean, who is elected by the Professors of his Faculty, and who, among other duties, presents to the Chancellor or Vice-Chancellor the Graduands of his Faculty. The names of the present Deans are given on pp. 2, 3, and 4. The Chairs in the various Faculties are here given in chronological order. The Faculties as previously constituted are given in the CALENDAR for 1893-94, and in previous CALENDARS.

## FACULTY OF ARTS.

The Faculty of Arts embraces the Chairs of Humanity (Latin), Greek, Mathematics, Logic and Metaphysics, Moral Philosophy, Natural Philosophy, Hebrew and Semitic Languages, History (two Chairs), Rhetoric and English Literature, Sanskrit and Comparative Philology, Commercial and Political Economy, Education, Fine Art, and Celtic.

## REGENTS AND PROFESSORS IN THE FACULTY OF ARTS SINCE 1583.

*Regents of Philosophy, 1583-1708.*

[The Regents of Philosophy taught in rotation the four classes in the Curriculum of Arts, the "Bajans," the "Semi-Bajans," the "Bachelors," and the "Magistrands," as the Students of the first, second, third, and fourth year were respectively styled. Each Regent therefore taught every subject in the Curriculum—the Regent of Humanity being subordinate to the Regent of Philosophy, and being employed as a tutor in Classics for Unmatriculated Students. In 1708 the system was changed, and separate Professors for Latin, Greek, Logic and Metaphysics, Moral Philosophy and Natural Philosophy, were substituted for the Regents. A Professorship of Mathematics had previously existed.]

- 1583. Robt. Rollock, first Regent
- 1583. Duncan Nairn
- 1585. Charles Lumisdail
- 1586. Adam Colt
- 1586. Alexander Scrimgeour

- 1587. Philip Heslop
- 1588. Charles Fermeor Fairholm
- 1589. Henry Charteris
- 1589. Patrick Sands
- 1594. George Robertson
- 1597. William Craig
- 1597. John Adamson
- 1598. James Knox
- 1598. Robert Scott
- 1601. Andrew Young
- 1603. James Reid
- 1604. David Munro
- 1606. Blase Colt
- 1607. James Fairley
- 1608. William King
- 1611. Andrew Stevenson
- 1625. Samuel Rutherford
- 1625. Robert Ranken
- 1626. Thomas Crawford
- 1626. John Brown
- 1631. Alexander Hepburn

- 1636. James Wyseman
- 1638. James Wright
- 1638. Robert Young
- 1639. Duncan Forrester
- 1644. William Tweedie
- 1644. James Pillans
- 1647. Andrew Suttie
- 1653. John Wishart
- 1665. George Sinclair
- 1666. John Wood
- 1667. William Paterson
- 1679. Gilbert M'Murdoch
- 1679. Andrew Massie
- 1680. Alexander Cockburn
- 1682. Robert Lidderdail
- 1684. Herbert Kennedy
- 1686. Thomas Burnet
- 1689. Alexander Cunningham
- 1690. William Law
- 1695. John Row
- 1695. William Scott
- 1701. Charles Areskine
- 1703. Robert Stewart
- 1707. Colin Drummond

*Regents of Humanity, 1597-1708.*

- 1597. John Ray
- 1606. Blase Colt
- 1611. Oliver Colt
- 1611. Robert Burnet
- Andrew Stevenson
- 1623. Samuel Rutherford
- 1626. Thomas Craufurd
- 1630. John Armour
- 1633. Alexander Gibson
- 1636. James Wyseman
- 1638. Robert Young
- 1644. James Pillans
- 1653. John Wishart
- 1656. William Forbes
- 1656. James M'Gowan
- 1658. Hugh Smith
- 1663. William Cumming
- 1665. Andrew Ross
- 1665. Thomas Bell
- 1676. Gilbert MacMurdo
- 1679. Alexander Cunningham
- 1689. John Drummond

*Professors of Mathematics.*

- 1620. Andrew Young
- 1640. Thomas Craufurd
- 1674. James Gregory
- 1683. David Gregory
- 1692. James Gregory
- 1725. Colin M'Laurin
- 1747. Matthew Stewart
- 1775. Dugald Stewart
- 1785. Adam Ferguson
- 1785. John Playfair
- 1805. John Leslie
- 1819. William Wallace
- 1838. Philip Kelland
- 1879. GEORGE CHRYSAL

*Professors of Humanity.*

- 1708. Laurence Dundas
- 1728. Adam Watt
- 1734. John Kerr
- 1741. George Stuart
- 1775. John Hill
- 1806. Alexander Christison
- 1820. James Pillans
- 1863. William Young Sellar
- 1891. Harry Chester Goodhart
- 1895. WILLIAM ROSS HARDIE

*Professors of Greek.*

- 1708. William Scott, *one of the Regents*
- 1729. William Scott, *secundus*
- 1730. Colin Drummond
- 1738. Robert Law
- 1741. Robert Hunter
- 1772. Andrew Dalziel
- 1805. George Dunbar
- 1852. John Stuart Blackie
- 1882. SAMUEL HENRY BUTCHER

*Professors of Logic and Metaphysics.*

- 1708. Colin Drummond, *one of the Regents.*
- 1730. John Stevenson
- 1774. John Bruce
- 1786. James Finlayson
- 1808. David Ritchie
- 1836. Sir Wm. Hamilton, Bart.

1856. Alex. Campbell Fraser  
1891. ANDREW SETH PRINGLE  
PATTISON

*Professors of Moral Philosophy.*

1708. William Law, *one of the Regents*  
1729. William Scott  
1734. John Pringle  
1745. William Cleghorn  
1754. James Balfour  
1764. Adam Ferguson  
1785. Dugald Stewart  
1810. Thomas Brown  
1820. John Wilson  
1853. P. C. M'Dougall  
1868. Henry Calderwood  
1898. JAMES SETH

*Professors of Natural Philosophy.*

1708. Robert Stewart, *one of the Regents*  
1742. John Stewart  
1759. Adam Ferguson  
1764. James Russell  
1774. John Robison  
1805. John Playfair  
1819. Sir John Leslie  
1833. James David Forbes  
1860. Peter Guthrie Tait  
1901.

*Professors of Hebrew and Semitic Languages.*

(See Faculty of Divinity.)

*Professors of History.*

1719. Charles Mackie  
1753. John Gordon  
1754. William Wallace  
1755. John Pringle

1780. Alexander Fraser Tytler  
1801. William Fraser Tytler  
1821. Sir William Hamilton  
1837. George Skene  
1842. James Frederick Ferrier  
1846. Cosmo Innes  
1874. Æneas Jas. Geo. Mackay  
1881. JOHN KIRKPATRICK  
1894. George W. Prothero  
1899. RICHARD LODGE

*Professors of Rhetoric and English Literature.*

1762. Hugh Blair  
1784. William Greenfield  
1801. Andrew Brown  
1835. George Moir  
1840. William Spalding  
1845. William Edmondstoune  
Aytoun

1865. David Masson.  
1895. GEORGE SAINTSBURY.  
*Professors of Sanskrit.*

1862. Theodor Aufrecht  
1875. JULIUS EGGELING

*Professors of Political Economy.*

(See also Faculty of Law.)

1871. W. B. Hodgson  
1880. JOSEPH SHIELD NICHOLSON

*Professor of Education.*

1876. SIMON SOMERVILLE  
LAURIE

*Professor of Fine Art.*

1880. GERARD BALDWIN BROWN  
*Professor of Celtic Languages, &c.*  
1882. DONALD MACKINNON

FACULTY OF SCIENCE.

[As Constituted in 1893 by Ordinance No. 12 (General No. 7).]

This Faculty embraces the Chairs of Mathematics, Natural Philosophy, Botany, Anatomy, Chemistry, Physiology, Natural History, Astronomy, Agriculture, Engineering, Geology, and Public Health.

PROFESSORS IN THE FACULTY SINCE ITS INSTITUTION IN 1893.

For Professors of Mathematics and Natural Philosophy, see under Faculty of Arts. For Professors of Botany, Anatomy, Chemistry, Physiology, Natural History, see under Faculty of Medicine.

*Professors of Practical Astronomy.*

- 1786. Robert Blair
- 1834. Thomas Henderson
- 1846. Charles Piazzi Smyth
- 1889. RALPH COPELAND

*Professors of Agriculture.*

- 1790. Andrew Coventry
- 1831. David Low
- 1854. John Wilson
- 1885. ROBERT WALLACE

*Professors of Engineering.*

- 1868. Fleeming Jenkin

- 1885. George Frederick Armstrong
- 1901. THOMAS HUDSON BEARE

*Professors of Geology.*

- 1871. Archibald Geikie
- 1882. JAMES GEIKIE

*Professor of Technology.*

- 1855. George Wilson  
[Chair abolished in 1859.]

*Professor of Public Health.*

- 1898. CHAS. HUNTER STEWART

FACULTY OF DIVINITY.

This Faculty, the second in date, consists of the Chairs of Divinity, Hebrew and Semitic Languages, Ecclesiastical History, and Biblical Criticism and Antiquities.

PROFESSORS IN THE FACULTY OF DIVINITY SINCE 1620.

*Professors of Divinity.*

- 1620. Andrew Ramsay
- 1627. Henry Charteris
- 1629. James Fairley
- 1630. John Sharpe
- 1648. Alexander Colvill
- 1649. Samuel Rutherford
- 1650. David Dickson
- 1662. Patrick Scougall
- 1664. William Keith
- 1675. Laurence Charteris
- 1682. John Menzies
- 1683. John Strachan
- 1690. George Campbell
- 1701. George Meldrum
- 1709. William Hamilton
- 1732. James Smith
- 1733. John Gowdie
- 1754. Robert Hamilton
- 1779. Andrew Hunter
- 1809. William Ritchie
- 1828. Thomas Chalmers
- 1844. John Lee

- 1859. Thomas J. Crawford
- 1876. ROBERT FLINT

*Professors of Hebrew.*

- 1642. Julius Conradus Otto
- 1656. Alexander Dickson
- 1679. Alexander Amedeus
- 1681. Alexander Douglas
- 1692. Patrick Sinclair
- 1694. Alexander Rule
- 1702. John Goodall
- 1719. James Crawford
- 1732. William Dawson
- 1751. James Robertson
- 1792. George Husband Baird
- 1793. William Moodie
- 1812. Alexander Murray
- 1813. Alexander Brunton
- 1848. David Liston
- 1880. David Laird Adams
- 1892. John Dobie
- 1895. ARCHIBALD ROBERT STIRLING KENNEDY

*Professors of Ecclesiastical History.*

- 1702. John Cumming
- 1715. William Dunlop
- 1726. Matthew Crawford
- 1737. Patrick Cumming
- 1762. Robert Cumming
- 1788. Thomas Hardie
- 1799. Hugh Meiklejohn
- 1831. David Welsh
- 1844. James Robertson

- 1861. William Stevenson
- 1872. Robert Wallace
- 1876. MALCOLM CAMPBELL  
TAYLOR

*Professors of Biblical Criticism and  
Biblical Antiquities.*

- 1847. Robert Lee
- 1868. Arch. Hamilton Charteris
- 1898. JOHN PATRICK

## FACULTY OF LAW.

To this Faculty belong seven Chairs, viz.:—Public Law, Civil or Roman Law, History (Constitutional, &c.), Scots Law, Forensic Medicine, Conveyancing, and Political Economy.

## PROFESSORS IN THE FACULTY OF LAW SINCE 1707.

*Professors of Public Law.*

- 1707. Charles Areskine
- 1734. William Kirkpatrick
- 1735. George Abercrombie
- 1759. Robert Bruce
- 1764. James Balfour
- 1779. Allan Maconochie
- 1796. Robert Hamilton
- 1832. \* \* \*
- 1862. James Lorimer
- 1890. Sir LUDOVIC GRANT, Bt.

*Professors of Civil Law.*

- 1710. James Craig
- 1732. Thomas Dundas
- 1745. Kenneth M'Kenzie
- 1755. Robert Dick
- 1792. John Wilde
- 1800. Alexander Irving
- 1827. Douglas Cheape
- 1842. A. Campbell Swinton
- 1862. James Muirhead
- 1889. Henry Goudy
- 1893. JAMES MACKINTOSH

*Professors of History (Constitutional, &c.).*

- 1719. Charles Mackie
- 1753. John Gordon
- 1754. William Wallace

- 1755. John Pringle
- 1780. Alex. Fraser Tytler
- 1801. William Fraser Tytler
- 1821. Sir William Hamilton
- 1837. George Skene
- 1842. James Frederick Ferrier
- 1846. Cosmo Innes
- 1874. Aeneas Jas. Geo. Mackay
- 1881. JOHN KIRKPATRICK

*Professors of Scots Law.*

- 1722. Alexander Bayne
- 1737. John Erskine
- 1765. William Wallace
- 1786. David Hume
- 1822. George Joseph Bell
- 1843. John Schank More
- 1861. George Ross
- 1864. George Moir
- 1865. Norman Macpherson
- 1888. JOHN RANKINE

*Professors of Forensic Medicine.*

- 1807. Andrew Duncan, *secundus*
- 1820. William Pulteney Alison
- 1822. Robert Christison
- 1832. Thomas Stewart Traill
- 1862. Sir Douglas MacLagan
- 1897. Sir HENRY DUNCAN  
LITTLEJOHN



*Professors of Conveyancing.*

1825. Macvey Napier  
1847. Allan Menzies  
1856. A. Montgomerie Bell  
1866. James Stuart Fraser Tytler

1892. John Philp Wood

1900. JOHN LITTLE MOUNSEY

*Professors of Political Economy.*<sup>1</sup>

1871. W. B. Hodgson

1880. JOSEPH SHIELD NICHOLSON

FACULTY OF MEDICINE.

The Faculty consists of thirteen Chairs:—Botany, Physiology, Medicine, Anatomy, Chemistry, Midwifery, Natural History, Materia Medica, Surgery, Clinical Surgery, Forensic Medicine, Pathology, and Public Health. The Professors of Medicine, Materia Medica, Pathology, and Midwifery (for Diseases of Women), are also Professors of Clinical Medicine. Some of these Chairs were instituted in the seventeenth century, but it does not appear that the Medical School and Faculty of the University were established until the beginning of last century.

PROFESSORS IN THE FACULTY OF MEDICINE SINCE 1676.

*Professors of Botany.*

1676. James Sutherland  
1706. Charles Preston  
1712. George Preston  
1738. Charles Alston  
1761. John Hope  
1786. Daniel Rutherford  
1820. Robert Graham  
1845. John Hutton Balfour

1773. Alex. Monro Drummond

1776. James Gregory

1789. Andrew Duncan

1819. Andrew Duncan, *secundus*

1821. William Pulteney Alison

1842. Allen Thomson

1848. John Hughes Bennett

1874. William Rutherford

1899. EDW. ALBERT SCHÄFER

*Professors of Medicine and Botany.*

*Professors of Botany.*

1879. Alexander Dickson  
1888. ISAAC BAYLEY BALFOUR

*Professors of Medicine.*

1685. { Sir Robert Sibbald  
James Halket  
Archibald Pitcairne

*Professors of Institutes of Medicine or Physiology.*

1724. William Porterfield  
1726. { Andrew St Clair  
John Rutherford  
1747. Robert Whytt  
1766. William Cullen

*Professors of Medicine.*

1724. William Porterfield

1726. { Andrew St Clair

{ John Rutherford

1747. Robert Whytt

1766. John Gregory

1773. William Cullen

1790. James Gregory

1821. James Home

1842. William Pulteney Alison

1855. Thomas Laycock

1876. Sir Thomas Grainger  
Stewart

1900. JOHN WYLLIE

<sup>1</sup> This Chair was declared to be a Professorship in the Law as well as in the Arts Faculty by resolution of the Senatus Academicus in 1879.

*Professors of Anatomy.*

1705. Robert Elliot  
 1708. Adam Drummond  
 1716. John M'Gill  
 1720. Alexander Monro  
 1754. Alex. Monro, *secundus*  
 1798. Alexander Monro, *tertius*  
 1846. John Goodsir  
 1867. Sir WILLIAM TURNER

*Professors of Chemistry and Medicine.*

1713. James Crawford  
 1726. Andrew Plummer  
 1726. John Innes  
 1755. William Cullen  
 1766. Joseph Black  
 1795. Thomas Charles Hope

*Professors of Chemistry.*

1844. William Gregory  
 1858. Lyon Playfair  
 1869. ALEX. CRUM BROWN

*Professors of Midwifery.*

1726. Joseph Gibson  
 1739. Robert Smith  
 1756. Thomas Young  
 1780. Alexander Hamilton  
 1800. James Hamilton  
 1840. Sir J. Y. Simpson, Bart.  
 1870. ALEX. RUSSELL SIMPSON

*Professors of Natural History.*

1770. Robert Ramsay  
 1779. John Walker  
 1804. Robert Jameson  
 1854. Edward Forbes  
 1855. George James Allman

1870. Sir Wyv. T. C. Thomson  
 1882. JAMES COSSAR EWART

*Professors of Materia Medica.*

1768. Francis Home  
 1798. James Home  
 1821. Andrew Duncan, *secundus*  
 1832. Sir Robt. Christison, Bart.  
 1877. THOMAS RICHARD FRASER

*Professors of Surgery.*

1777. Alex. Monro, *secundus*  
 1798. Alexander Monro, *tertius*  
 1831. John William Turner  
 1836. Sir Charles Bell  
 1842. James Miller  
 1864. James Spence  
 1882. JOHN CHIENE

*Professors of Clinical Surgery.*

1803. James Russell  
 1833. James Syme  
 1869. Joseph Lister  
 1877. THOMAS ANNANDALE

*Professors of Forensic Medicine*  
(See Faculty of Law.)*Professors of Pathology.*

1831. John Thomson  
 1842. William Henderson  
 1869. W. R. Sanders  
 1881. WM. SMITH GREENFIELD

*Professors of Military Surgery.*

1806. John Thomson  
 1823. Sir George Ballingall  
 [Chair abolished.]

*Professor of Public Health.*

1898. CHAS. HUNTER STEWART

## FACULTY OF MUSIC.

*Reid Professors of Music*

1839. John Thomson.  
 1841. Sir Henry Rowley Bishop  
 1844. Henry Hugh Pearson

1845. John Donaldson  
 1865. Sir Herbert Stanley Oakeley  
 1891. FREDERICK NIECKS

The Principal is a member of this Faculty *ex officio*, and Professor Kirkpatrick was appointed a member by the Senatus.

## GENERAL COUNCIL OF THE UNIVERSITY.

The Chancellor, the Members of the University Court, the Professors, and the Graduates, are entitled to be registered as Members of the General Council. The fee for registration is £1.

The Register, now containing 8883 Members, is conclusive of the rights of persons to be Members up to 1st January 1902. By the Universities Elections Amendment (Scotland) Act all candidates for graduation must pay the Registration Fee before they can appear for graduation.

Under the Universities Act of 1858, and the Commissioners' Ordinance No. 1, section 3, the Council meets twice a year—viz., on the *first Wednesday of May*, and on the *last Friday in October*, at three o'clock P.M., “to take into their consideration all questions affecting the well-being and prosperity of the University, and to make representations from time to time on such questions to the University Court, who shall consider the same, and return to the Council their deliverance thereon.” All proposed improvements in the arrangements of the University “shall be submitted to the University Council for their consideration.”

By the Universities Act 1889, besides the two statutory meetings above mentioned, the Council “may hold special meetings at the instance of the Chancellor, who shall convene such meetings on a requisition from a quorum of members, and the Council may adjourn any meeting, and may appoint Committees to investigate into and report upon any matter remitted to them or to carry out instructions given to them by the Council.” The Commissioners under this Act have fixed the quorum of the General Council at ten for every thousand or fraction of a thousand of members on the register, but this provision does not apply to the statutory half-yearly meetings, or to adjourned meetings.

At the meetings of the General Council, in the absence of the Chancellor, Rector, and Principal, the Chancellor's Assessor, and in his absence the Rector's Assessor shall preside; and in the absence of all of these, a Chairman shall be elected by the meeting, but no member of Senatus can preside at any meeting held for the election of an Assessor or Assessors. The

Chairman shall decide all points of order, and has a deliberative and a casting vote ; and in case of an equality of votes at the conclusion of a poll, the Chairman, or any one appointed by the University Court to act for him, shall have a casting vote.

The General Council of this University, and that of the University of St Andrews, together return a Member of Parliament.

The *Chancellor* of the University and *four of the Assessors* in the University Court are elected by the Council. The Chancellor holds office for life, and the Assessors for four years. Two of the Assessors retire biennially, but may be re-elected. In case of a casual vacancy the person elected to fill it retires when the person whom he succeeded would in ordinary rotation have retired. No member of the Senatus can vote or take part in the election of any Assessor of the General Council. The next election of two Assessors will take place at the statutory half-yearly meeting in *October 1901*.

Members of the General Council may borrow books from the Library and have out at one time five volumes on payment of an annual fee of 10s. 6d., or a single payment of £5 ; or may have ten volumes on payment of an annual fee of £1, 1s., or a single payment of £10.

Two Standing Committees are appointed by the General Council—viz., a Business Committee and a Finance Committee. The Conveners are :

*Business Committee*—J. Campbell Lorimer, LL.B.

*Finance Committee*—David D. Buchan, LL.B.

#### STUDENTS' REPRESENTATIVE COUNCIL.

*Presidents*—L. Bashford, D. O. Dykes, A. A. Hall, M.A.  
*Joint Hon. Secretaries and Treasurers*—H. L. Munro, 18 Hill-side Crescent ; H. Simpson, 52 Queen Street. *Hon. Auditor*—James Walker, C.A.

The Students' Representative Council was founded in 1884. Its functions are—(1) To represent the Students in matters affecting their interests ; (2) To afford a recognised means of communication between the Students and the University authorities ; and (3) To promote social life and academic unity among the Students. The Council is elected annually in

November, partly by the Students of the different Faculties, and partly by the recognised Students' societies. The Ordinary Meetings are held in November, December, January, February, March, May, June, July, and October. At the November meeting an executive committee is elected, consisting of the three presidents, two secretaries and treasurers, and eleven other members, representing the five Faculties. The Council also carries out its work by means of the following Standing Committees :—The Inter-Universities, Library, Social Residence, Amusements, *Student*, International Academic and Women's Committees. During the Winter Session it publishes weekly a University Magazine.

The Commissioners, acting under the Universities Act 1889, have issued an Ordinance to the following effect :—

- (1.) The Students' Representative Council shall submit to the University Court the regulations under which it exists, and these regulations as approved shall form the constitution of the Students' Representative Council.
- (2.) After the University Court has approved of the constitution, alterations must receive the approval of the University Court.
- (3.) 1. The Council may petition the Senatus as to any matter affecting the teaching and discipline of the University, and the Senatus shall dispose of the matter, or shall, if so prayed, forward such petition to the University Court, with such observations as it may make thereon.  
 2. The Council may petition the University Court as to any matter affecting the Students other than those falling under sub-section 1.  
 3. This Section shall not prejudice any right of appeal under Section 6, sub-section 2, of the said Act, nor the powers and jurisdiction of the Senatus, as to teaching and discipline.

### MATRICULATION.

University Matriculation consists in signing the *Sponsio Academica*, the Student thus entering his or her name in the Album of Students of the University, and in paying a fee of £1, 1s. for the academic year (1st Oct. to 1st Oct.), or a fee of 10s. 6d. for a Summer Session (1st May to 1st October). No person shall be deemed to be a Matriculated Student or shall enjoy any of the privileges of a Matriculated Student unless, in addition to paying the matriculation fee, he is enrolled as a Student in attendance in one or more classes in the University, and has paid the fees entitling him to such attendance: Provided that nothing herein contained shall affect the right of the University Court to exact a fee in lieu of and not exceeding the matriculation fee from any candidate for any examination or



for graduation, not being at the time a Matriculated Student, in addition to the fee payable for such examination or graduation. No one can attend a University Class without matriculating, except in those special cases in which an Entrance Fee of 5s. only is exacted (see page 29).

The Matriculated Students elect the Rector of the University. In case of an equality of votes, the Chancellor, or failing him, the Principal, has the casting vote. Students are also admitted to the University Library, and on certain days to the Museum of Natural History.

Candidates for Graduation who are attending Extra-Academical Lectures in Edinburgh, and not attending Classes within the University, must, at the beginning of each year, enrol their names in a book kept for that purpose, and pay a Fee of the same amount as the Matriculation Fee. In respect of such payment they have a right to use the University Library.

Sponsio Academica signed by students on matriculating :—

QUOD FAUSTUM FELIXQUE SIT. A. D.—

Ego Universitatis Academicæ Edinburgensis Discipulus sincerè ac sanctè promitto quod et syngraphâ hac meâ in perpetuum testatum cupio, mihi ante omnia cordi ac curae futurum veræ pietatis studium ; me etiam in assuetis academici curriculum studiis sedulum fore, ut adolescentem bene institutum decet ; et quamdiu in illo curriculo permansero praeceptoribus omnibus morigerum memet praestiturum, nec ullius dissidii aut tumultus clam palamve vel auctorem vel participem futurum, et per reliquam vitam Universitatem Academicam Edinburgensem ipsam grato et benevolo animo prosecuturum, idque omnibus officiis pro facultate mea et occasione data testaturum esse.

#### MATRICULATIONS (1st May 1900 to 1st May 1901).

FOR SUMMER SESSION 1900 :—

I. Faculty of Arts	.	.	.	.	.	.	15
II. Faculty of Science	.	.	.	.	.	.	7
III. Faculty of Divinity	.	.	.	.	.	.	0
IV. Faculty of Law	.	.	.	.	.	.	3
V. Faculty of Medicine	,	.	.	.	.	.	22

SUMMER SESSION 1900 brought forward,	.	.	47
FOR YEAR (1st May to 1st May) :—			
I. Faculty of Arts . . . . .			834
II. Faculty of Science . . . . .			154
III. Faculty of Divinity . . . . .			40
IV. Faculty of Law . . . . .			349
V. Faculty of Medicine . . . . .			1352
VI. Faculty of Music . . . . .			24
			<hr/> 2753

Total Matriculations (1st May 1900 to 1st May 1901) 2800

NON-MATRICULATED EXTRA-ACADEMICAL GRADUATION  
STUDENTS (1st May 1900 to 1st May 1901).

I. Faculty of Medicine :—	
Summer Session 1900 . . . . .	10
Year (1st May to 1st May) . . . . .	<hr/> 75

Total Non-Matriculated Extra-Academical Students (1st May to 1st May) . . . . . } 85

UNIVERSITY ENTRANCE FEE FOR NON-MATRICULATED STUDENTS.

The University Court may admit non-Matriculated Students to any Class, on payment of an Entrance Fee (fixed at 5s.) in addition to the Class Fee ; but such attendance (1) will not qualify for Graduation, (2) nor entitle the Student to a Certificate of Attendance, (3) nor confer any other University privilege.

Courses which may be attended under this Regulation :—

- Fine Art, short additional Courses on.
- Procedure and Evidence.
- Mental Diseases.
- Diseases of the Eye.
- Clinical Instruction on Diseases of Children.
- Comparative Embryology.
- Forestry.
- Agricultural Entomology.
- Music Classes.
- Practical Pathological Bacteriology.
- Chemical Laboratory.
- Experimental Pharmacology.
- Italian Language and Literature.
- Celtic (for Classes not qualifying for Graduation).
- German Lit. and Prose Comp. Courses, twenty lectures each.
- Advanced Practical Physiology.
- International Private Law.
- Physics for non-Graduation Women Students of Medicine.

Diseases of Tropical Climates.

Mackay Lectures and other non-Graduation Courses on History,  
by Mr D. P. Heatley.

Garton Lectures on Colonial and Indian Agriculture.

Economics Course, by Mr Arch. B. Clark.

Number of Non-Matriculated Students who have paid the Entrance Fee  
1st May 1900 to 1st May 1901—49.

Other Courses may be sanctioned under this Regulation.

Students are subject to the disciplinary jurisdiction of the Senatus. Among offences visited with severe academic penalties may be mentioned riotous or disorderly conduct, copying at examinations, and mutilating or disfiguring books belonging to the Library.

### UNIVERSITY EXAMINERS.

The Examiners for Degrees are the Professors of, or Lecturers on, the different subjects, along with additional Examiners appointed by the University Court. As a general rule, no Professor, Lecturer, or University Assistant or Demonstrator can be appointed an additional Examiner.

### GRADUATION CEREMONIALS.

The relative precedence of each Faculty is as follows :—1. Divinity ; 2. Law ; 3. Medicine ; 4. Arts ; 5. Science ; 6. Music. The Deans take precedence in their respective Faculties, followed by the Members of their Faculties in the order of the dates of their Commissions.

Public Graduation Ceremonials are held annually about the middle of April (chiefly for Divinity, Law, Arts, Science, and Music), and about the end of July (for Medicine and Science). A special Ceremony is usually held about the end of October (chiefly for Degrees in Medicine).

Graduates must appear on these occasions in Academic Costume.

### ACADEMIC COSTUME.<sup>1</sup>

*Chancellor.*—Robe of Black Brocaded Satin, trimmed with Gold Lace, and with Gold Frogs down fronts and on sleeves. Black Silk Velvet Trencher, with Gold Button and Tassel.

*Vice-Chancellor.*—Robe and Trencher same as Chancellor's, but trimmed with Silver in place of Gold.

*Rector.*—Black Silk Gown, with Crimson Silk Velvet sleeves. The gown is trimmed round the collar and down the front edges with Broad Gold Lace, and the sleeves round bottom with a narrower Gold Lace. Black Silk Velvet Trencher, with Gold Button and Tassel.

<sup>1</sup> Graduates are requested to appear for Graduation wearing one hood only—viz., the one which indicates the Degree they are about to receive.

*Principal*.—Mauve Corded Silk Robe trimmed with Velvet to match. Black Silk Velvet Trencher, with Gold Button and Tassel.

*Members of University Court*.—Black Silk Robe, open sleeve, with Gold Frog on each sleeve.

With all of the above, Hoods appropriate to the Degree are worn.

The ordinary form of Gowns worn by Graduates of the University is the same in all the Faculties—viz., black silk or stuff, with long sleeves. The distinctive part of the costume is in the *Hood* appropriated to each Faculty. These Hoods are as follow :

LL.D.—Black *cloth*, lined with *blue* silk.

LL.B.—Black *silk*, lined with *blue* silk, bordered with white fur.

B.L.—Black *silk*, edged with *blue* silk three inches broad, trimmed with white fur.

D.D.—Black *cloth*, lined with *purple* silk.

B.D.—Black *silk*, lined with *purple* silk, bordered with white fur.

M.D.—Black *cloth*, with appended cape, lined and faced with *crimson* silk.

M.B. and Ch.B.—Black *silk*, lined with *crimson* silk, bordered with white fur.

D.Sc.—Black *cloth*, lined with *green* silk.

B.Sc.—Black *silk*, lined with *green* silk, bordered with white fur.

M.A.—Black *silk*, lined with *white* silk.

D.Litt.—Black *cloth*, lined with *royal blue* and *maize shot* silk.

D.Phil.—Black *cloth*, lined with *Vesuvius* and *white shot* silk.

Mus.D.—Rich scarlet *cloth*, with rich *white* corded silk lining.

Mus.B.—Scarlet *silk*, with *white* silk lining, edged with *white* fur.

The full Academic Dress for Doctors is a Gown of superfine Scarlet Cloth, loose sleeves, the cape and facings down the front covered, and the sleeves lined, with rich silk of the colour proper to the Degree. Birretum of black silk velvet.

## REGULATIONS OF UNIVERSITY COURT.

### I.—ABSENCE OF PROFESSORS.

1. When any Professor shall be prevented from teaching his Class for more than three successive days, an arrangement shall be made for his Class being taught in his absence ; and such arrangement shall be intimated to the Dean of his Faculty.

2. When any Professor has reason to expect that the demands of his Profession may involve absence from duty for more than four days in all in the course of a Session, an arrangement similar to that in Regulation 1 shall be made and intimated to the Dean of his Faculty.

3. No arrangement for teaching a Class in absence of the Professor shall continue longer than one week without the sanction of the Senatus Academicus ; or, if there be no sufficiently early meeting of the Senatus, without the *interim* sanction of the Principal and Deans Committee.

4. When any Professor shall contemplate an absence from duty of

more than one week, it shall be necessary for him to obtain the sanction of the Senatus for such absence, and for the arrangements for teaching his Class; and if his contemplated absence extend to four weeks or upwards, the sanction of the Senatus shall require the confirmation of the University Court.

5. No Professor shall employ any one other than a Colleague or University Assistant to teach his Class for him, without obtaining the sanction of his Faculty; and such sanction shall be communicated to the Senatus at its first meeting thereafter.

6. The Statement of the arrangements for teaching a Class in the absence of the Professor, submitted to the authorities of the University, shall specify the remuneration proposed to be given to the Professor's Substitute.

## II.—ABSENCE OF EXAMINERS.

1. Any University Examiner who finds himself prevented from being present at any Examination at which it is his duty to act, shall intimate this to the Dean or other Chairman of his Examining Board, who, on receiving such intimation, or otherwise becoming aware of the absence of the Examiner, shall, if possible, appoint a properly qualified Substitute to act for such Examiner.

2. In every case in which a person is appointed to act as Substitute for a University Examiner, and in which his Faculty, or Examining Committee, shall consider it necessary that the Substitute shall receive remuneration, the rate of remuneration to be paid by the Examiner (whether a Professor or Additional Examiner) to his Substitute shall be fixed by the Faculty, or Examining Committee, and shall be based upon the amount of the Fees payable to the Additional Examiners attached to the Faculty or Examining Committee.

3. All absences of University Examiners, their duration and cause, and the relative arrangements made, shall be immediately reported for approval to the Senatus Academicus by the Chairman of the Board to which the absent Examiner is attached; and a similar Report shall in every case of the absence of a University Examiner be made by the Senatus Academicus to the University Court; provided always that such arrangements shall receive immediate effect when circumstances do not permit the previous approval of the Senatus Academicus to be obtained.

4. In every case in which a Professor shall apply for leave of absence from his duties generally, provision shall be made, under the existing Regulations regarding leave of absence to Professors, for the performance of his duties as Examiner, as well as for the performance of his duties as Teacher; and provision shall be made for the remuneration of his Substitute in both capacities.

## III.—APPLICATIONS FOR ADDITIONAL (OR NON-PROFESSORIAL) EXAMINERSHIPS IN THE UNIVERSITY.

1. Applicants should lodge twenty copies of their applications (one



of which should be signed), and twenty copies of any testimonials they may desire to present, with the Secretary of the Court, not later than one week before the day fixed for making appointments in each case.

2. Applicants who send in testimonials must not send more than four for any one appointment.

3. Persons may be appointed to examine in two of the thirteen Subjects of the Examinations for Graduation in Medicine, but not more, and not in more than one Subject in any one Division of the Examinations.

4. Every applicant for an appointment in Divinity must hold the degree of B.D. from a Scottish University.

Every applicant for an Examinership in Law must be a Bachelor of Laws of a Scottish University.

#### IV.—OPENING OF NEW CLASSES.

No class in addition to those existing in the University shall at any time be opened,—whether for the purpose of dividing the course on a subject necessary for graduation, or for teaching a class not requisite for graduation,—without the approval of the Senatus and the sanction of the University Court.

#### V.—RECOGNITION OF EXTRA-ACADEMICAL TEACHERS.

1. Every applicant for recognition shall furnish for the information of the Authorities of the University :—

(1.) A Statement of his Registered Qualification or Qualifications, and of the name of the Office, or Appointment (if any) which he holds, as a Teacher of the Subject in which he requests recognition.

(2.) A Syllabus of his Course of Lectures ; or, in the case of a Practical Class, information of a similar kind.

(3.) A Statement of the number of Lectures, and of the number of Written or Oral Examinations in the Course ; or, in the case of a Practical Class, information of a similar kind.

(4.) A Short Description of his Accommodation for a Class ; and of the Apparatus, Illustrative Specimens, Diagrams, and other appliances, at his disposal for teaching the Subject in which he desires recognition.

(5.) A Statement of his opportunities of studying the Subject, and of the length of time devoted thereto.

(6.) A Statement of the experience he has had in teaching the Subject.

(7.) A Note of the Titles of his published Contributions to the Science of the Subject.

(8.) A Statement as to whether his Course or Courses of Instruction have been already recognised by any University or other examining body, and, if so, what means were adopted for ascertaining his qualifications for teaching.

2. In the case of every Applicant for recognition residing in Edin-

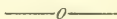
burgh or its neighbourhood, an inspection shall be made of his teaching Appliances and Accommodation for teaching.

3. Every recognised Extra-Academical Teacher shall annually furnish the University with the information regarding his Course or Courses which is required from the University Professors as to (1.) The number of Students attending the recognised Course or Courses of Instruction ; (2.) The number of meetings for ordinary Class Work in the Session, and in each week thereof ; (3.) The number of Special Written Examinations ; (4.) The system of conducting the ordinary Class Work, and the number of meetings devoted to each kind of work.

4. The Certificate of Attendance granted to Students by recognised Extra-Academical Teachers, should, in all cases, state the duration of the Course and the number of Meetings for Systematic, Tutorial, and Practical Instruction, respectively ; the number of occasions on which attendance was ascertained, and the number of those occasions on which the Student was present ; and the number of Class Examinations held during the Course, and whether or not the Student has taken a satisfactory part in the work of the Course, including the Class Examinations, if any. The Certificate should also state the general scope of the Course ; and, in particular, in the case of Chemistry, that the Course included Organic as well as Inorganic Chemistry ; in the case of Midwifery, that it included the diseases of Women and Children ; and, in the case of Practical Materia Medica, that it included Pharmacognosy, Pharmacy, Dispensing, and the writing of Prescriptions.

5. When application is made for the recognition of a Course taught by two or more Teachers in conjunction, information shall be given of the share to be taken by each Teacher in such conjoined Course ; and the recognition of such conjoined Courses, and of each of the persons recognised as Teachers of a conjoined Course shall, *ipso facto*, terminate should one or more of the Teachers cease to conduct the Course, or should any material change be made in the share of each Teacher in the teaching of the conjoined Course.

6. The recognition of any Teacher who fails to furnish the information called for in Section 3, or an explanation relative to such failure ; or who has ceased for the period of two consecutive Sessions to teach the subject on which he is recognised, shall, *ipso facto*, terminate.



## University Buildings.

THE University Buildings at present consist of: (1) The College, or University (Old) Building, with Dome, in South Bridge Street ; (2) The New Buildings (School of Medicine), Teviot Place ; and (3) The Music Class Room, Park Place.

## I.—THE UNIVERSITY (OLD) BUILDING.

The Old Building, on the site of "Kirk o' Field," the scene of the murder of Darnley, contains the Library and Reading Rooms; the Class Rooms of the Faculties of Arts, Divinity, and Law, the Natural History, and some other Science Class Rooms; the Theological Library and Reading Room; the Examination Hall; the Physical, and the Geological and Petrological Laboratories; the Fulton Engineering Laboratory; the Physical, Geological, Fine Art, and Natural History Museums; the Senate Hall, University Court Room, and the Offices of the Senatus, the Court, and the Students' Representative Council.

The work of teaching began in 1583, but before the end of the eighteenth century, the professors and students had been very imperfectly housed. In a Memorial, dated 1768, Principal Robertson complains that the buildings, "poor in themselves, seem not to have been carried on according to any regular plan, such as takes place in other academical structures which have been erected on more opulent foundations; and hence the whole fabric has a mean, irregular, and contemptible appearance." At that time the number of students was between six and seven hundred, and that of professors twenty-one.

Twenty years later a writer in the "Scots Magazine" complains that "in 1788 the buildings of the University are in the same ruinous condition that they were in in 1768, and the most celebrated University at present in Europe is the worst accommodated." A scheme for rebuilding, often discussed, was now taken up seriously by the Town Council, encouraged by promise of liberal aid from Government. A plan was obtained from Robert Adam, then at the height of his reputation, and the foundation stone of "the New College of Edinburgh" was solemnly laid on 16th November 1789.

Adam's original plans, preserved in the Soane Museum in London, divide the space now occupied by the College buildings into two quadrangles, a smaller to the east, entered as now from South Bridge Street, and a larger beyond it to the west, with a block of academic buildings lying between. This arrangement was doubtless suggested by the rapid rise of the

ground from north-east to south-west. Round these two courts there were to be Class Rooms, Museums, a Library, and also houses for the Principal and Professors. The western side of the larger court was to be occupied by a Graduation Hall and Chapel ; and the great quadrangle was to be flanked with corridors, affording communication between the class-rooms. The building, begun chiefly on the eastern and northern sides, was, however, soon stopped by the death of the architect in 1792, and by failure of funds. In 1815 a Government Commission was appointed to collect funds and to carry out the undertaking, though in a modified form. They invited plans "for finishing the College of Edinburgh, on a reduced scale, leaving out the south front, and the cross building, which formed the small court in the original plan,—regard being always had to the part already executed, and to the preservation of the architecture of Mr Adam, as far as practicable." Out of nine sets of plans sent in, those of William Henry Playfair were selected, and under his superintendence the work was practically completed in 1828, at a total cost of about £161,000.

The general character of the whole design is due to Robert Adam. Some portions were erected by him, or completed after his death from his drawings. In other parts some modification of his plans and elevations was necessary, while a third portion had to be designed anew by Playfair, who was careful to conform to Mr Adam's design. The handsome eastern façade, with its monolithic columns 22 feet in height, was erected by Adam, who intended to have embellished it with a certain amount of sculpture. He also erected the north-west corner of the great court, of which the circular Loggie form an admired feature, carried out part of the north side, and began the western block. Playfair threw the two courts into one, and designed the north and south interior elevations anew. In the western block he adhered to Adam's designs ; but the interior treatment of the block, fitted up for the Natural History Museums, is his own ; and the "Upper Museum," now the Natural History Laboratory, is a good specimen of his style. The "circular corners" designed by Adam for his great court

were retained by Playfair for his single quadrangle. On the exterior, the north front is Adam's, and its plainness is due to the fact that only a narrow lane instead of the broad Chambers Street then bounded the College on that side. Adam's handsome design for the south front was simplified by Playfair, but is still superior to the north elevation.

The difficulty of the levels in the quadrangle was satisfactorily overcome by Playfair by surrounding the court with a terrace, which affords a suitable architectural base for the noble buildings rising above it. But Playfair's great achievement is the Library Hall, a fine gallery 185 feet by 54 feet, with an arched ceiling enriched with cassettes.

The general effect of the buildings is simple and dignified. The material is mainly Craighleith stone, and the detail carving is well worked out. The single quadrangle, measuring 242 feet 6 inches from east to west, by 134 feet from north to south, is a great improvement on the original plan of 1789, though the essentials of the design are due to Adam. The interior elevations of the quadrangle, especially on the west, and the eastern front to South Bridge Street, may safely be pronounced excellent specimens of the neo-classic style.

#### THE DOME.

Adam's original design provided for a Dome over the eastern portal, but as his sketch was not very pleasing, no steps were taken to carry out this feature until 1883, when funds came into the possession of the University, bequeathed for this purpose by Robert Cox, Esq., W.S. It was then determined to carry out the Dome on a new design by R. Rowand Anderson, LL.D., Architect of the University New Buildings (School of Medicine). The present Dome, though less purely classical than the Adam-Playfair building, is pleasing and effective. An admirable finial is formed by a vigorous and athletic figure of Youth, bearing the torch of Knowledge, executed in bronze by John Hutchison, Esq., R.S.A. The Dome now contains the Fine Art Museum.

## II.—THE UNIVERSITY NEW BUILDINGS.

### (SCHOOL OF MEDICINE.)

In 1869 the number of students had risen to fifteen hundred,



and that of the Professors to thirty-three, while there were seventeen Class Rooms only for their use. A Committee was therefore formed in 1873, and an appeal was made to the public for subscriptions for the purchase of a site for and the erection of complete Class Rooms, Theatres, Laboratories, and Museums for the Faculty of Medicine ; for reorganising the Class Rooms in the Old Building for the Faculties of Arts, Divinity, and Law ; for providing better accommodation for the Library ; for erecting a Hall for examinations and academic ceremonials ; and for improving the north front of the College building.

This appeal to the public yielded a sum of £148,548, 2s. 5d., which, with a grant of £80,000 from Government, and interest, rents, &c., amounted to £244,587, 4s. 8d.

These buildings (the University New Buildings), begun in 1878, were partly opened for teaching purposes in October 1880, and after their completion, were transferred by the Committee to the University in October 1888. They are situated on a site formerly covered by Teviot Row, Park Street, and Park Place, and were designed by R. Rowand Anderson, LL.D., Architect, and completed under his supervision.

They contain the Lecture Rooms, &c., of the Faculty of Medicine (excepting those of Botany and Natural History), the Museums of Practice of Physic, Anatomy, Chemistry, Obstetrics, Materia Medica, and Surgery ; a Students' Reading Room, Students' Common Room, Faculty of Medicine Reception and Reading Rooms, and Office of the Faculty.

The style of architecture is Italian of the Cinque-Cento period, intermediate between the Gothic and the stiff Palladian work, which aims at a mere manipulation of the five orders. The main frontage presents a slightly projecting elevation, pierced by the archway which forms the principal entrance. Over the arch is an ornate window, flanked by pilasters, between which are niches for statuary ; and the whole is surmounted by a bold semi-circular pediment, intended to be occupied with sculpture. The façade is three storeys in height except in the projecting west wing, which has an additional floor. On the ground floor the windows are square. Above these runs a well-marked string-course orna-

mented with dentils. The first-floor windows are round-headed and furnished with architraves. Next comes a broad frieze relieved at intervals with circular panels. Over this the string-course is repeated ; and the upper-floor windows are separated by pilasters, and divided by shafts supporting circular tracery. The wall is finished at the top with architrave, frieze, and cornice, and crowned with a low-pitched roof. The external features have of course been influenced by the internal arrangements.

### THE M'EWAN HALL.

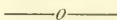
In the month of November 1885, the Acting Committee for the University of Edinburgh Buildings Extension Scheme, resolved to apply to Parliament for power to acquire property adjoining the University as a site for a University Hall. Certain members of the Committee were incorporated as Trustees for this purpose, and one of their number, Mr William M'Ewan, M.P., munificently offered to contribute the sum required for the erection of the Hall, on condition that the cost of the site was provided from other sources. A Parliamentary grant of £8000 was obtained, and Mr M'Ewan having generously provided the balance required, the site was purchased. The erection of the "M'Ewan Hall," so named by the Senatus Academicus in grateful recognition of the Donor, was begun in 1888 and finished in 1897, from the designs and under the superintendence of R. Rowand Anderson, LL.D. The total cost of the Hall including the extensive scheme of mural painting executed by Mr William M. Palin, and the Grand Electric Organ, was about £115,000, and as an architectural monument it is not excelled by any Academic building in the country.

The Hall is of theatre form, and the external elevation conforms to the architectural style of the early Italian Renaissance adopted in the other University New Buildings. It is capable of holding upwards of 2600 people, and is used for Academic Ceremonials, Concerts of a high-class, and other functions approved by the University Court.

## III.—REID SCHOOL OF MUSIC.

The School of Music, situated immediately to the south-east of the University New Buildings, was built in 1858, from the designs of the late David Cousin. It contains the Music Class Room, with an organ of four manuals and sixty-six stops, in a handsome carved oak case ; and a Museum of interesting acoustic and antique musical instruments.

The architecture of the building is in the Italian Renaissance style of the early part of the sixteenth century.



## University Library.

## LIBRARY COMMITTEE.

THE Library Committee consists of not more than seven members, not being members of the Senatus, appointed by the University Court, and of such number appointed by the Senatus as shall be double the number appointed by the Court. The Committee is charged with the superintendence of the Library, and of any libraries acquired, or to be acquired, for the use of the University. The members of the Committee are appointed by the University Court and the Senatus respectively at their first meeting in the Winter Session.

Principal Sir WILLIAM MUIR,	} <i>Joint Chairmen.</i>
THOMAS M'KIE, Advocate,	
Professor EGGELING,	} <i>Joint Conveners.</i>
J. BURGESS, C.I.E., LL.D.,	

Professor Baldwin Brown ; Professor Crum Brown ; James Taylor Brown, Esq., LL.D. ; Professor Cossar Ewart ; Professor Flint ; Rev. Edward F. Hoernle, M.B. ; A. Taylor Innes, M.A. ; Professor Kirkpatrick ; Professor Lodge ; Professor Mackinnon ; Professor Niecks ; Professor Patrick ; Professor Saintsbury ; Professor Simpson ; Professor Schäfer ; John Turnbull Smith, LL.D. ; John Arbuthnot Trail, LL.B.

In 1580 Mr Clement Littil or Little left his books to "Edinbvrgh and Kirk of God thair to reman." This collection of about 300 volumes, chiefly theological (see list in Miscellany of the Maitland Club, vol. i., 1834), was transferred by the Town

Council to the University, and became the nucleus of the University Library.

The celebrated Poet, Drummond of Hawthornden, bequeathed his library to the University in 1627—a valuable gift, both from the eminence of the donor, and the rare specimens of early literature it embraces (see *Auctarium Bibliothecæ Edinburgensæ*, 1627).

Among noteworthy donors are Principal Adamson; Dr Robert Johnston, a physician in London; the Rev. James Nairne of Wemyss, in Fife; Dr John Stevenson, Professor of Logic and Metaphysics in the University; and Dr William Thomson, Professor of Anatomy in the University of Oxford. In 1872, Mr J. O. Halliwell, the eminent Shakespearean critic, presented his very valuable collection of works relating to Shakespeare. In 1875 a large collection of Persian and Arabic MSS. was presented by Mr J. B. Baillie of Leys; in 1879 an extensive collection of MSS. was received from the executors of David Laing, LL.D.; in 1880 the works on Economic Science collected by Professor Hodgson were presented by Mrs Hodgson; in 1882 valuable works on Sanskrit Literature were presented by the family of Dr John Muir; and in 1886 Mr Thomas Stratton bequeathed 110 works bearing on the study of Celtic. In 1889 Sir William Mackinnon, Balinakill, purchased the books of Dr Cameron of Brodick, an eminent Celtic scholar, for £600, for presentation to the University; and the same year the Library received a collection of MS. Shakespeariana from Mr Halliwell-Phillipps, and a number of books belonging to the late Professor Wilson, from Mrs Wilson. A “Lorimer Collection,” in memory of the late Professor Lorimer, was presented by his son-in-law, Sir David P. Chalmers. In 1895 Professor Blackie left to the Library his collection of modern Greek books; and important additions were received from the Goodsir bequest, and from Major Sprot, as representative of the late Dr Cleghorn of Stravithie. In 1898 Sir William Fraser left a very handsome legacy to the Library, putting it for the first time since the General Reid Bequest ceased to be separately administered, in possession of funds of its own.

The Library contains about 208,000 printed volumes, and about 7500 MSS., many of which are of great value.

The University also possesses a number of valuable pictures and busts, which adorn the Library and the Senate Hall.

The Library Hall, and the suite of rooms connected with it, occupy the south side of the quadrangle (Old Buildings).

In 1895 the following Library Regulations were laid down by Ordinance (No. 64) :—

I. The Librarian shall have the ordinary management of the Library of the University, subject to the superintendence of the Library Committee appointed under the provisions of Ordinance No. 8 [St Andrews, Aberdeen, and Edinburgh, No. 1,—Libraries and Museums].

II. The Librarian, and such Assistant-Librarians as the University Court, on the report of the Library Committee, may think necessary, shall be appointed by the University Court. The University Court shall also have the power of suspending or dismissing such Librarian and Assistant-Librarians.

III. All books ordered for the Library by the Library Committee shall be sent direct to the Librarian, and all books received by him shall be forthwith catalogued by him in such manner as the Library Committee may direct, and stamped with the Library stamp; and no person shall be allowed to use or borrow any book until it has been entered in the catalogue and stamped.

IV. The Librarian shall, with the approval of the Library Committee, from time to time prepare a list of such books, manuscripts, and other works as cannot, in consequence of any deed of gift or otherwise, be lent out of the Library; and the Library Committee shall from time to time make such regulations as they shall think expedient for allowing access to such works for consultation.

V. Manuscripts, rare books, works of reference, and such other works as the Library Committee shall determine, shall not be lent out of the Library, except under regulations to be made by the Library Committee and approved by the Senatus Academicus and the University Court; and, in addition to such general regulations, the Library Committee may, in each individual case of borrowing such works, impose such special conditions as they may think necessary or expedient: Provided always that every such special permission and all such additional conditions imposed by the Library Committee shall be entered in the Minute-Book of the Committee.

VI. It shall be in the power of the Librarian at any time to withdraw any work from circulation, subject to appeal to the Library Committee.

VII. It shall be in the power of the University Court, after consultation with the Senatus Academicus, and on the report of the Library Committee, to sell or exchange such works as they consider it in the best interests of the Library to dispose of.

VIII. A general inspection of the Library shall take place at such times and during such periods as the University Court, on the report of the Library Committee, shall determine, and all works whatsoever, and by whomsoever borrowed, shall be returned to the Library before the commencement of such periods, under a penalty previously fixed and publicly notified by the University Court.

IX. The Library Committee shall frame regulations to be approved by the University Court, under which the persons hereinafter mentioned may respectively



borrow or consult books. Such regulations shall prescribe, *inter alia*, (a) the number of books which the said persons shall be entitled to borrow; (b) the period for which they shall be allowed to retain them; (c) the penalties to be imposed in the event of their failure to return books in due time, or in the event of books being lost or injured.

The persons entitled to borrow books shall be :—

1. Members of the Senatus Academicus and University Lecturers.
2. University Assistants and Examiners.
3. The Librarian and Assistant-Librarians.
4. Matriculated Students.
5. Extra-academical Teachers, recognised by the University Court, in the town in which the University is situated.
6. Students enrolled in any Scottish University as attending the lectures of extra-academical teachers in the town in which the University is situated, and who are already entitled by Ordinance to the use of the Library.
7. Persons who have retired or who shall hereafter retire from the office of Principal or Professor.
8. Members of the University Court.
9. Members of the General Council.

Provided that no member of the University Court or of the General Council shall be entitled to obtain from the University Library books required by the Teachers or Students of the University in the prosecution of academic work and research, and that it shall be in the discretion of the Librarian, subject to appeal to the Library Committee, to decide from time to time what books are so required.

In fixing the number of books to be borrowed by the aforementioned persons respectively, due regard shall be had to the preferable claims of those engaged in teaching and studying in the University.

X. Members of the General Council shall be required, as a condition of exercising the privilege of borrowing books, to pay such subscription as the University Court shall fix from time to time.

XI. The University Court shall determine what sum, if any, shall be deposited by those entitled to borrow books.

XII. The Library Committee, with the approval of the University Court, may admit to the use of the Library, upon such conditions as to subscription and otherwise as they may require, members of the General Council of other Scottish Universities and Graduates of the University who, by reason of being under the age of twenty-one years, are not qualified to be members of the General Council.

XIII. It shall be in the power of the Library Committee from time to time to grant the use of the Library to such extent and on such conditions as they shall think expedient to persons who may not be members of the University, for purposes of literary research, and the names of those privileged readers shall be reported annually to the University Court.

XIV. So long as any Library subscription or any fine incurred remains unpaid, and so long as any person continues in possession of a book which he is not entitled to retain, the right of the defaulter to the use of the Library shall be suspended and remain in abeyance.

XV. The Library Committee shall, in an annual report to the Senatus Academicus, furnish information as to :

1. The state in which the borrowing registers are kept, and whether there is in use any finding list or other means for facilitating the recal of books.
2. The condition of the various catalogues, whether they are brought up to date or not; the amount of arrears, if any, of the cataloguing of the titles of current acquisitions; and what portions of the Library, if any, remain uncatalogued.
3. The amount of money spent in the purchase of books and periodicals respectively, and how the expenditure has been distributed among the several departments of literature and science.

XVI. At such time as shall be fixed by the Senatus Academicus the Librarian shall report to the Senatus in reference to the year then ended :

1. The particulars of every case of admission to special reading privileges.
2. The particulars of every case in which the right to the use of the Library has been suspended or is in abeyance.
3. Every case in which a book belonging to the Library has been replaced at the expense of a borrower.
4. The titles of all books belonging to the Library, known to have been lost or seriously injured, or found at the time of inspection to be amissing.
5. The titles of all books entered as missing in previous reports which have been recovered.
6. The number of accessions to the Library acquired by purchase and received in donation respectively.
7. Any other matter which the Librarian may think it of importance to bring under the notice of the Senatus Academicus, or which he may be directed by the Library Committee to report.

The Senatus Academicus shall forward the report to the University Court.

XVII. Ordinances numbered 68 and 89 of the Commissioners under the Universities (Scotland) Act, 1858, are hereby repealed, provided that the regulations therein contained shall continue to be in force in each University until new regulations have been framed by the Library Committee, and approved by the University Court under the provisions of this Ordinance.

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## SUPPLEMENTARY REGULATIONS UNDER ORDINANCE 64, XVII.

1. The Library is open on Mondays, Tuesdays, Wednesdays, Thursdays, and Fridays, from 10 A.M. to 4 P.M. during the Winter Session ; from 10 A.M. to 3 P.M. during the summer and autumn ; and on Saturdays from 10 A.M. to 1 P.M. throughout the year ; with the following exceptions :—

During the Christmas Vacation and the month of August the Library is open on the above-mentioned days (exclusive of Saturdays) from 10 A.M. to 1 P.M. only.

The Library is closed on Saturdays during the Christmas Vacation and the month of August ; on the King's Birthday, Victoria Day, Christmas Day, New Year's Day, Good Friday, the Saturday before Easter, and the Edinburgh Spring and Autumn Holidays ; and (except for the return of books) during the Annual Inspection (see Regulation IX.).

II. Members of the undermentioned classes of readers may borrow from the Library and have out at one time, respectively, the number of books specified below, but no larger number (except as provided in Regulation VII.):

Members of Senatus and University Lecturers—25 vols.

Former Principals and Professors, Members of the University Court and the Library Committee, University Assistants, University Examiners, and the Librarian—10 vols.

Members of the General Council of any Scottish University, Graduates of Edinburgh University under the age of 21, and extra-academical teachers recognized by the University, on an annual payment of 10s. 6d., or a single payment of £5—5 vols. : on an annual payment of £1, 1s., or a single payment of £10—10 vols.

Assistant-Librarians and Clerks in University Offices (being of age)—5 vols.

III. No person shall be allowed to borrow books in more than one capacity.

IV. Subject to the provision as to the return of books before the Annual Inspection (Regulation X.), every member of the classes mentioned in Regulation II. is entitled to retain a book for one month : but this period may be prolonged until the time of the Annual Inspection, if the book is not otherwise required under Regulation VI. Provided that the Librarian may recall a book at any time, if required for class purposes.

V. Every Matriculated Student and every student enrolled as attending an extra-academical teacher in Edinburgh (under Ord. No. 16, Edinburgh, No. 1, Sect. viii., Sub-sect. 5) may borrow and have out at one time three volumes, but not more,

and may retain any book for two weeks ; but this period may be prolonged, with the permission of the Librarian, if the book is not otherwise required under Regulation VI. Provided that every such student, before borrowing a book for the first time in each academical year, must exhibit his Matriculation Ticket, and one Class Ticket, and deposit £1 at the Matriculation Office ; after which his name will be enrolled in the Library Books. Provided also that the Librarian may recall a book at any time, if required for class purposes.

VI. When a borrower has had a book out for a period (as determined by Regulations IV. and V.) of one month or two weeks, as the case may be, the Librarian may recall such book, if required by another person. If the book so recalled be not returned on or before the day specified on the notice of recall, the borrower shall be liable to a fine of one shilling per volume ; and to a further fine of sixpence per volume for every subsequent day so long as the book is not returned, until the total amount of the fine is equal to the sum for which the book can be replaced. Provided that, in the case of students, only half the above-mentioned fines shall be required, until the total amount is equal to the value of the book.

VII. In exceptional cases, the Library Committee may increase the number of books allowed by Regulations II., and V., or extend the periods fixed by Regulations IV. and V. ; provided that in every such case the additional number or period be specified, and entered in the Committee's minutes, and that the Committee may attach to the permission such conditions as it may deem advisable.

VIII. No book shall be given out except to the borrower in person, or to some one having written authority from him ; nor without the presentation of a Library Ticket, or a written request, signed by the borrower : and all books borrowed shall be entered immediately, with the date of borrowing, in the ledger or ledgers kept for the purpose.

IX. A General Inspection of the Library shall take place

annually during the month of April, and shall last for one week. During this period the Library shall be closed, except for the return of books.

X. All books, except as provided for by Regulation XI., must be returned to the Library before the commencement of the General Inspection, under a penalty of one shilling for every volume not returned. Notice of each book not so returned shall be sent forthwith by the Librarian to the borrower, requiring its return before the close of the Inspection ; and if the book or books so required be not returned on or before that date, the borrower shall be liable to a fine of sixpence a day for each volume so long as it is not returned, until the total amount of the fine is equal to the sum for which the book can be replaced. Provided that, in the case of students, only half the above fines shall be required, until the total amount is equal to the value of the book.

XI. In exceptional cases, the Library Committee may, before the commencement of the General Inspection, and on the written application of the borrower, give permission to keep out a book or books over one period of Inspection only, provided that the borrower sign a fresh ticket for them.

XII. All books returned to the Library, if not sent by rail or post, must be delivered, at the Library-counter, to the Librarian or one of the Assistant-Librarians ; and a receipt for books so returned shall be given if required.

XIII. Unbound numbers of periodicals shall remain for consultation in the Library during the first month after publication ; they may then be borrowed, but shall not be retained longer than fourteen days without the special permission of the Librarian.

XIV. Manuscripts, books, and other works contemplated under Ordinance 64, Section iv., are divided into two classes. Those in class (*a*) may be consulted with the permission of the Librarian, who shall report such permission to the Library Committee at their next meeting ; those in class (*b*) may not



be consulted without the leave of the Library Committee previously obtained. Works included in either class shall be consulted only in such parts of the Library as the Librarian shall determine.

XV. Manuscripts, books, and other works contemplated under Ordinance 64, Section v., are divided into two classes, viz.: (a) works of reference, (b) manuscripts and other works. Works comprised in class (a) may be lent out by the Librarian from the hour of closing to the next hour of opening (except during the Annual Inspection), subject to a penalty of two shillings a day per volume if not returned. Manuscripts and other works comprised in class (b) may be lent out by permission of the Library Committee only, subject to such conditions as the Committee may in each case determine. Provided that, in urgent cases, such works (not being manuscripts) may be provisionally lent out by the Librarian and two members of the Library Committee, subject to the approval of the Committee at their next meeting, and to such conditions as the Committee may in each case determine.

XVI. All fines shall be collected by the Librarian, and paid over by him to the Factor of the University. A report of names and amounts shall be made annually by the Librarian to the Library Committee. No fine shall in any case be remitted, except by order of the Library Committee, on sufficient cause shown.

XVII. No books or papers not belonging to the University shall be stored within the Library Building, without the special permission of the Library Committee.

XVIII. The use of matches or open lights, in any part of the Library Building, is strictly prohibited.

XIX. No persons except the Library Staff, not being actual or former members of the Senatus, University Lecturers, members of the University Court or of the Library Committee, or persons having permission under Regulation XIV., are allowed to enter or remain in any part of the Library Building beyond

the counter, except in the company of the Librarian or an Assistant-Librarian; unless by special permission of the Library Committee, or (in urgent cases) of the Librarian and two members of the Committee, subject to the approval of the Committee at their next meeting.

XX. The Librarian shall report to the Library Committee, so soon as possible, all cases in which a book has been mutilated, disfigured by writing, or otherwise injured while in the possession of readers; and offenders may be required to replace the injured book, or may be fined to an amount not exceeding the value of the book, or deprived of the privilege of using the Library, at the discretion of the Committee.

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*N.B.*—The word “book,” in the foregoing regulations, is to be taken as including manuscripts, pamphlets, bound or unbound periodicals, and other written or printed matter being the property of the University Library.

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## READING ROOMS.

### I. OLD BUILDINGS.

A separate collection of books is set apart for the use of Students.

Those wishing to consult books must insert in one of the slips provided for the purpose their Matriculation Number, Name and Residence, and the title of the Book, and present the slip to the Librarian in attendance.

Each slip will render the person who has signed it responsible for the book named. The counterfoil of the slip should, therefore, be reclaimed from the Librarian when the Book is returned, or whenever the Book applied for is not available.

Every volume must be returned by the borrower before leaving the Reading Room. Students are forbidden to leave the Books on the table; they are required to hand them to the Librarian, and to get back the counterfoils. To prevent confusion, this should be done a few minutes before the close of each hour by those about to attend classes.

Besides the books in the Reading Room, each Student may consult in the Reading Room Two Volumes daily from the General Library : Provided he has handed in slips applying for them on the previous day, before 2 P.M. To such books the same rules will apply as to those consulted from the Reading Room.

No conversation or noise is permitted in the Reading Room.

The Librarian is responsible for the management of the Reading Room. Any difficulty that may arise must be referred to him, or, if necessary, through him to the Library Committee.

Students, on first applying for books in the Reading Room, must exhibit their Matriculation Tickets.

All books taken into the Reading-Room from the General Library shall be examined and returned to their place in the General Library each day. No books shall be issued from the General Library, for use in the Reading-Room, after 3.20 in Winter or 2.30 in Summer; and all books from the General Library shall be given up in the Reading-Room at 3.45 in Winter and 2.45 in Summer.

The Reading-Room is available for either men or women Students. It is open daily, holidays excepted, during the Winter Session from 10 to 4 and from 8 to 10 P.M.; Saturdays 10 to 1; and during the Summer Session from 10 to 3; Saturdays 10 to 1.

A Special Reading-Room is set apart for women students.

## II. NEW BUILDINGS.

In the New Buildings is a Students' Reading-Room containing Books of Reference for those attending the Classes in the Faculty of Medicine. The Regulations as to consulting Books are similar to those in the Reading-Room in the Old Buildings. It is open daily, during Sessions, from 9 A.M. to 5, and 8 to 10 P.M.; Saturdays, 9 A.M. to 12. It is open in September and during the week in which the Spring Holiday occurs (Saturday excepted) from 10 A.M. to 1. It is closed during August and the Christmas vacation, and on holidays.

## THEOLOGICAL LIBRARY.

This Library, founded in 1698 for Students in Theology, contains above 10,000 volumes. The management is vested in

six Curators, chosen by ballot by the "Cives" of the Library from their own number. Students of Divinity of this or other Scottish University are admitted as Cives on paying: the former, two shillings and sixpence; the latter, five shillings, per annum. No one who, when a Student of Divinity in this University, failed to enter as a Cives, may afterwards do so until he has paid up the arrears of two shillings and sixpence for each year of his Theological Course in which he failed to pay. No Cives can be elected a Curator unless at least in the second year of his attendance at the Divinity Hall. The election takes place in the second week of December, one-third of the Curators going out annually by rotation. The Curators elect one of their own number to be Treasurer. The Curators and Treasurer report the state of the funds, &c., to the Cives, the Theological Faculty, and the Senatus. The books purchased are selected by the Curators, subject to the approval of the Faculty of Divinity. The Professor of Divinity, who if *ex officio* Honorary Librarian, annually appoints an acting Librarian. Books may not be kept out of the Library longer than two months.

#### SELLAR AND GOODHART CLASSICAL LIBRARY.

This Library was instituted by private subscription in October 1897, in memory of Professors Sellar and Goodhart. It is used as a reading-room and library of reference for Students reading for Honours in Classics. It contains nearly 1000 volumes, and is managed by a Committee consisting of the Professors of Greek and Latin, the Assistants to the Professors, and five representatives elected by the Members.

Subscription for year, 6s.; for Winter Session, 5s.; for Summer Session, 3s.

#### HONOURS PHILOSOPHICAL LIBRARY.

This Library was instituted by private subscription in January 1897, along with libraries in connection with the ordinary classes of Logic and Moral Philosophy. It is used

both as a Lending Library and as a Library of Reference and is placed in a room adjoining the Moral Philosophy Classroom which is used as a reading-room for Honours Students. It is managed by a Committee consisting of the Professors of Logic and Moral Philosophy, the Assistants to the Professors, and two representatives elected by the Honours Classes.

Subscription for year, 5s.; for Winter or Summer Session, 3s.

#### HISTORY LIBRARY.

This Library, founded by Professor Kirkpatrick in 1891, and greatly extended by a donation of £100 from Professor Tiele of Leyden, Gifford Lecturer in 1896-98, is open to Students in both the Ordinary and the Honours Classes in General and Constitutional History and Political Science. It is used mainly as a Library of Reference and a Reading-room, and is superintended by the Assistant in History.

#### PHYSIOLOGY LIBRARY.

The late William Rutherford, M.D., Professor of Physiology or the Institutes of Medicine in the University from 1874 to 1899, bequeathed to the Senatus Academicus all his books and periodicals relating to Physiology and allied subjects, on condition that they should be deposited in the Physiological department of the University in charge of the Professor of Physiology.

It is proposed to continue the periodicals and to add to the Library by donation or otherwise as opportunity may occur. The books have been placed in a suitable room in the department of Physiology, which is used as a Library of Reference and Reading-Room for those who are engaged in Research work in Physiology: and the books may be consulted at any time on application to the Professor or to one of the assistants in the department who have special charge of the Library.

#### ASTRONOMY LIBRARY.

A sum of about £300 was subscribed in order to perpetuate the memory of the late Mr Andrew J. Ramsay, for the formation and endowment of a Library in the Royal Observatory for the use of Students attending the class of Astronomy.



## MUSIC LIBRARY.

This Library of music and books on music owes its existence to bequests, donations, and especially the Reid Fund. Professor John Thomson, Théophile Bucher, and the Scottish Musical Society may be mentioned as, next to General Reid, the chief benefactors. It is used as a Reference Library and Reading-Room, its management being in the hands of the Professor of Music.

PORTRAITS AND BUSTS IN THE SENATE HALL, LIBRARY, COURT ROOM, ANATOMICAL MUSEUM, MUSIC CLASS ROOM, AND DOME.<sup>1</sup>

### I. PORTRAITS.

There are twenty-seven Portraits of Benefactors, Principals, Professors, and others, by Raeburn, Sir John Watson Gordon, and other Artists, in the Senate Hall, four in the Library, sixteen in the University Court Room, and one in the Music Class Room.

#### *Portraits presented since 1890.*

##### *In Senate Hall.*

James Lorimer, M.A., LL.D., Dr Jur., Professor of Public Law (1862-1890).

Joseph Black, M.D., Professor of Chemistry and Medicine (1766-1795).

Lord Playfair, Professor of Chemistry (1858-1869), by Pickersgill. R.A., presented by the present Lord Playfair.

##### *In Court Room.*

General Sir Joseph Straton, Benefactor of the University.

John Wyllie, C.B., M.D., Physician General, Madras Army.

Miss Eleanor A. Ormerod, LL.D., formerly Examiner in Agricultural Entomology.

##### *In Midwifery Retiring-Room.*

Sir James Young Simpson, Bart., M.D., D.C.L., Professor of Midwifery (1840-1870), by Sir John Watson Gordon. Presented to Sir James by the poet Sydney Dobell.

### II. BUSTS.

There are forty Busts in the Upper Library Hall, two in the Anatomical Museum, and one in Room in Dome.

In order to honour and perpetuate the names of Benefactors who have founded Scholarships, Bursaries, or new Chairs in the University.

<sup>1</sup> There is a separate printed Catalogue of the Portraits and Busts in the University, and of the Torrie Collection. A detailed Catalogue will also be found in the Calendar for 1890-91, p. 61, as well as in the previous Calendars.

the University authorities have made arrangements for placing their Busts or Portraits in the Library and University Court Room.

Regarding as Benefactors the eminent Professors who have elevated the character of the University by their writings or discoveries, the University desires to procure Portraits or Busts of James and David Gregory, Colin Maclaurin, Matthew Stewart, Dr Cullen, Dr James Gregory, Dr Alison, Sir Chas. Bell, Lord Woodhouselee, Dr Thos. Chas. Hope, Professors Ross, Macdougall, Muirhead, Sellar, Campbell Fraser, and Sir Thomas Grainger Stewart.

*Busts presented since 1890.*

*In Library Hall.*

Rt. Hon. John Inglis, D.C.L., LL.D., Lord Justice-General, Chancellor of the University (1868-1891).

John Rae, M.D., LL.D., Arctic Explorer.

James Miller, M.D., LL.D., &c., Professor of Surgery in the University (1842-64).

John Goodsir, F.R.S., Professor of Anatomy in the University (1846-1867).

David Masson, M.A., LL.D., Professor of Rhetoric and English Literature (1865-95).

Sir Douglas Maclagan, M.D., LL.D., Professor of Medical Jurisprudence (1862-1897), by John Hutchison, R.S.A.

*In Students' Reading Room.*

Thomas Carlyle, Rector of the University (1865-1868).

*In Physiology Class-Room.*

William Rutherford, M.D., F.R.S., F.R.S.E., Professor of Physiology in the University (1874-1899).

Thomas Chalmers, D.D., Professor of Divinity (1828-1843), by Sir John Steele, R.S.A. (subject to liferent of Miss Chalmers).

**TORRIE FINE ART COLLECTION.**

Sir James Erskine of Torrie, by a Will, dated April 1834, bequeathed to the University his Pictures, Bronzes, and Marbles, "for the purpose of laying a foundation for a GALLERY for the encouragement of the Fine Arts." The collection is at present temporarily deposited in the National Gallery until funds can be obtained for its suitable display in the College, and for carrying more fully into effect the intentions of the testator.

The Pictures, forty-five in number, include choice specimens of the works of different Masters, especially in the Flemish and Dutch Schools. The Marbles, seventeen in number, and twenty-three Bronzes, have been chosen with a correct appreciation of the merits of this department, and the whole collection reflects credit on the taste and public spirit of Sir James Erskine.

## Museums.

A MUSEUM COMMITTEE, consisting of three members, not being members of the Senatus, appointed by the University Court, and of six appointed by the Senatus, is charged with the superintendence of all Museums belonging to the University, and of any collections, furniture, or apparatus, or objects acquired for the use of the University or of any class therein. The members are appointed by the University Court and Senatus respectively at their first meeting in the Winter Session of each year.

*Members of Committee appointed by the University Court.*

Sir James Alexander Russell, M.A., M.B., C.M., B.Sc. ; Patrick Heron Watson, M.D. ; Joseph Bell, M.D.

*Appointed by the Senatus Academicus.*

Professors Geikie (*Convener*), Sir William Turner, K.C.B., Fraser, Greenfield, Schäfer.

Of the following Museums several belong partly or wholly to the Professors of the respective subjects :—

1. NATURAL PHILOSOPHY MUSEUM. A large and very valuable collection of physical apparatus, chiefly modern.
2. MUSIC AND MUSICAL INSTRUMENTS.—A very interesting and valuable collection of acoustic and musical instruments.
3. GEOLOGICAL MUSEUM.—For class purposes, showing the characters of minerals and rocks, and the typical fossils of the different geological systems.
4. FINE ART MUSEUM.—A small collection of casts, photographs, and drawings, in the Dome above the portal, illustrating the main points in the history of classical art.
5. MUSEUM OF THE ROYAL BOTANIC GARDEN. — This Museum is open to Students.
6. PHYSIOLOGICAL MUSEUM.—A large collection of Physiological Instruments, Microscopes and Microscopical Appliances, Diagrams, and Preparations.
7. PRACTICE OF PHYSIC MUSEUM.—Pathological specimens, drawings, models, diagrams, etc.
8. ANATOMICAL MUSEUM.—Founded in 1800 by Dr Monro, *secundus*, who presented his own Anatomical Collection, and that of his father, to the University, “to be used by his

successors for the purpose of demonstrating and explaining to the Students the structure, physiology, and diseases of the human body." In 1859, Sir David Monro, M.D., presented a collection of anatomical preparations, formed by his father, Dr Alexander Monro, *tertius*. Numerous additions were also made by Professor Goodsir, especially in the department of Comparative Anatomy, on whose death the Senatus purchased his Private Museum, and added it to the Collection. The Museum now contains several thousand specimens in illustration of Human Anatomy, both normal and pathological, and of Comparative Anatomy.

The Conservator will gratefully receive contributions of rare and interesting specimens from Graduates and former Students. He is especially desirous of making the collection thoroughly representative of the osteology of the different Races of Men.

The Collection was transferred in 1884-5 to the University New Buildings in Teviot Place, where it is arranged in a large and handsome Hall with two galleries. It is open at certain hours to all matriculated students. The pathological collection occupies the upper gallery. The spirit-preparations in illustration of normal Human and Comparative Anatomy are arranged in the lower gallery. The osteological collection is disposed in the cases on the floor, and suspended in the centre of the Hall. In 1887 the Henderson Trustees committed to the custody of the Conservator their valuable collection of crania and casts.

Conservator of the Museum, the Professor of Anatomy ; Assistant-Conservator, Mr Alexander M. Osler.

9. CHEMISTRY MUSEUM.—Professor Playfair, afterwards Lord Playfair, on his resignation of the Chair of Chemistry, presented to the University the chemical substances he had used in illustrating his lectures. The collection has been increased by gifts from chemical manufacturers and others, and by substances prepared in the University Laboratory.

10. THE OBSTETRICAL MUSEUM, besides a few preparations left by Professor Hamilton, contains instruments, preparations, models, and diagrams, collected by Sir James Y. Simpson, and added to by the present Professor of Midwifery, to whom they belong.

11. THE MUSEUM OF NATURAL HISTORY.—The old Museum, established in 1812 in the University, contained Zoological, Geological, and Mineralogical Collections, formed chiefly by Professor Jameson, for fifty years Professor of Natural History

and Regius Keeper of the Museum. In 1854 it was transferred by the Town Council, then the Patrons of the University, to Government, and removed to the Natural History Department of the New Museum of Science and Art, where it is still accessible to Students of Natural History and Geology.

A Zoological Museum is now being formed in the University. Graduates and others interested will greatly aid in this important undertaking by presenting specimens to the Keeper—the Professor of Natural History.

12. MATERIA MEDICA MUSEUM.—One of the most complete collections of medicinal and food substances in this country, founded by Professor Andrew Duncan. His successor, Sir Robert Christison, added many valuable specimens, mounted for the most part by himself with singular neatness. The present Professor has made extensive additions. The Museum has been greatly enriched by interesting donations from former members of the Class in all parts of the world. There is also a Students' Reading Museum, containing specimens of the medicinal substances used in this country, formed and arranged by the present Professor.

13. SURGICAL MUSEUM.—This collection, formed by Professor Spence, has been largely extended by the present Professor, to whom it belongs. Many additions have been made, both of pathological preparations and of plaster and gelatine casts, illustrative of Surgical Anatomy and Pathology. A complete catalogue may, on application, be consulted by practitioners of medicine.

## ROYAL BOTANIC GARDEN AND ARBORETUM.

The Royal Botanic Garden, Inverleith Row, is connected with the University, in so far as the Professor of Botany delivers his Lectures in the Hall in the Garden.

The Garden is open daily. Specimens of plants for study are supplied to Students so far as practicable.

The Botanical Museum in the Garden is open to Students daily, and the University Herbarium, which is placed in the Garden, may be consulted between 10 and 1, and 2 and 5, under the direction of the Professor or the Curator.

The Botanical Laboratory in the Garden is open daily for work and original research.



# Faculty of Arts.

Dean.—PROFESSOR CHRYSTAL, LL.D.

*Students who do not intend to graduate in Arts may attend any of the Classes on payment of the Matriculation and the Class Fees, without having passed any Preliminary Examination. Those who wish their Classes to count for Graduation must pass the Preliminary Examination. The Classes in the Faculty are open to Women, except a few in which provision has not yet been made for teaching them. Provision has, however, been made to admit Women to Graduation in Arts who have received the requisite instruction at the Medical College for Women, Chambers Street, Edinburgh, or from Lecturers specially recognised for that purpose, in the subjects in which classes are not open to them in the University.*

*The classes will be opened as follows, and will meet daily (Saturdays excepted), unless otherwise stated. They will meet for the last time before the Christmas vacation on Friday, 20th December 1901; will re-assemble on Tuesday, 7th January 1902, and will be closed on Thursday, 27th March 1902. Courses in the Faculties of Law, and of Medicine, which qualify for Graduation in Arts, close on 20th and 21st March respectively. The Annual Graduation Ceremonial in Arts, &c., will be held on Friday, 11th April 1902.*

## Programme of Classes.

### WINTER SESSION, 1901-1902.

Classes.	Days of Opening and Hours of Attendance	Professors and Lecturers.	Class Fees. <sup>1</sup>
<b>I.—DEPARTMENT OF LANGUAGE AND LITERATURE.</b>			
Junior Latin.....	15 Oct., 9 o'cl. & also on Mon. & Wed. 11 o'cl.	Prof. Hardie	£ s. 3 3
Senior Latin <sup>23</sup> .....	15 Oct., 10 „		3 3
Honours Latin.....	17 Oct., 12 „		3 3
Junior Greek.....	15 Oct., 10 „ & also on Tues., Thurs., & Fri., 11 o'cl.	Prof. Butcher	3 3
Senior Greek <sup>23</sup> .....	15 Oct., 11 o'cl.		3 3
Honours Greek.....	17 Oct., 10 „		3 3
Classical Archæology (Honours Course) <i>Mon., Wed., Fri.</i>	16 Oct., 5 „	Prof. Baldwin Brown.....	3 3
English.....	15 Oct., 4 „	Prof. Saintsbury	3 3
English Literature (Honours Course) <sup>3</sup>	16 Oct., 2 „ 8 Jan., 2 „		3 3
English Language (Honours Course) <sup>3</sup>	18 Oct., 3 „ 8 Jan., 3 „		3 3
French (Pass) <sup>2</sup> .....	15 Oct., 3 „	G. Gregory Smith, M.A. Charles Sarolea, Ph.D., D. Litt.	3 3
French (Honours).. Italian <sup>4</sup> .....	16 Oct., 4 „ 16 Oct., 5 „		3 3
			3 3 <sup>5</sup>

<sup>1</sup> Fees for second, third, and subsequent attendances, see page 65.

<sup>2</sup> Students who wish to take the Classes of Senior Latin, Senior Greek, or French as qualifying for Graduation in Arts, must have previously passed in Latin (Higher Standard), Greek (Higher Standard), or French respectively, either as part of their Preliminary Examination or in addition thereto.

<sup>3</sup> This Course may be divided into two Half-Courses. Fee for each, £2, 2s.

<sup>4</sup> An Honours Course may be given by Dr Sarolea.

<sup>5</sup> Five Shillings University entrance fee for Non-Matriculated Students. Payment of this fee does not entitle a Student to a Class Certificate nor confer any other University privilege.

## WINTER SESSION, 1901-1902—continued.

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees. <sup>1</sup>
I.—DEPARTMENT OF LANGUAGE AND LITERATURE— <i>cont.</i> £ s.			
German (Pass) <sup>4</sup> .....	15 Oct., 4 o'cl. }	Otto Schlapp, Ph.D. }	3 3
German Prose Com- position ( <i>Wed.</i> ) <sup>2 11</sup> ..	16 Oct., 4 „ }		1 1 <sup>10</sup>
German <sup>2 3</sup> Lit. ( <i>Fri.</i> )...	18 Oct., 4 „ }		1 1 <sup>10</sup>
German (Honours) <sup>3</sup> ...	16 Oct., 3 „ }		3 3
German Adv. Prose Comp. ( <i>Wed.</i> ) <sup>2 3</sup> ....	16 Oct., 3 „ }	Prof. Eggeling }	1 1 <sup>10</sup>
Sanskrit (Junior Class),	16 Oct., 3 „ }		3 3
Do. (Senior Class) <sup>4</sup>	16 Oct., 4 „ }		3 3
Hebrew (Junior Class)	15 Oct., 1 „ }		3 3
Do. (Senior Class) <sup>4</sup>	22 Oct., 2 „ }	Prof. Kennedy.. }	3 3
Arabic <sup>4 5</sup> ( <i>Mon.</i> , <i>Wed.</i> , & <i>Fri.</i> ).....	23 Oct., 3 „ }		3 3
Syriac <sup>4</sup> ( <i>Tues.</i> & <i>Thurs.</i> ).....	22 Oct., 3 „ }		2 2
Celtic <sup>4</sup> .....	15 Oct., 4 „ }		2 2 <sup>6 10</sup>
Do. Advanced }	21 Oct., 3 „ }	Prof. Mackinnon.. }	1 1 <sup>10</sup>
Gaelic Class .....	22 Oct., 3 „ }		1 1 <sup>10</sup>
II.—DEPARTMENT OF MENTAL PHILOSOPHY.			
Logic & Psychology.	15 Oct., 1 o'cl. }	Prof. A. S. Pringle Pattison.....	3 3
Metaphysics and Hist. of Philosophy (Honours Class)...	22 Oct., 4 „ }		2 2 <sup>6</sup>
Moral Philosophy.....	15 Oct., 2 „ }	Prof. James Seth }	3 3
Do. Honours Class...	23 Oct., 4 „ }		2 2 <sup>6</sup>
Political Economy <sup>8</sup> }	15 Oct., 5 „ }	Prof. Nicholson... }	3 3 <sup>7</sup>
Do. Honours Course <i>Mon. Tu. &amp; Thurs.</i> }	17 Oct., 3 „ }		3 3 <sup>7</sup>
Education (Theory, History, & Art of) }	15 Oct., 12.10 „ }	Prof. Laurie.....	3 3
Philosophy of Law <sup>9</sup> }	15 Oct., 2 „ }	Prof. Sir Ludovic Grant, Bart...	2 2
(45 Class Meetings) }		Prof. James, Harvard Uni- versity.....	Free.
Natural Theology (Gifford Lecture- ship).....	Dates will be after- wards announced.		

<sup>1</sup> Fees for second, third, and subsequent attendances, see page 65.<sup>2</sup> *Twenty Lectures* may be taken as separate course.<sup>3</sup> Lectures given in German.<sup>4</sup> Students who wish to take the Classes of German, Sanskrit, Hebrew, Arabic, Syriac, or Celtic as qualifying for the M.A. Degree, must have previously passed a Preliminary Examination in these Languages as nearly as possible equivalent in standard to the Examinations in Latin and Greek in the Preliminary Examination.<sup>5</sup> Half-Course qualifying for M.A. degree, see p. 79.<sup>6</sup> When taken as a Graduation Course, £3, 3s.<sup>7</sup> Or two Half-Courses, £2, 2s. each.<sup>8</sup> Course up to Christmas qualifies in Economics for the B.Sc. in Agriculture.<sup>9</sup> Half-Course.<sup>10</sup> See footnote 5, page 58.<sup>11</sup> Students must be at least 18 years of age.

## WINTER SESSION, 1901-1902—continued.

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees. <sup>1</sup>
III.—DEPARTMENT OF SCIENCE.			£ s.
Junior Mathematics...	15 Oct., 12 o'cl.	Prof. Chrystal...	3 3
Senior Mathematics <sup>2,3</sup>	15 Oct., 9 „		3 3
Mathematics, Inter- mediate Honours..	16 Oct., 11 o'cl. (Mon., Wed., Fri.)		3 3
Do. (Advanced Honours) .....	16 Oct., 10 o'cl. (Mon., Wed., Fri.)		3 3
Natural Philosophy <sup>2</sup> ..	15 Oct., 11 o'cl.	Prof. ....	3 3
Do. (Advanced Honours, Mon., Wed., Fri.).....	23 Oct., 12 „		3 3
Physical Laboratory..	23 Oct., 10 „		2 2
Natural Philosophy (Intermediate Honours, Mon., Wed., Fri.).....	16 Oct., 9 „	Cargill G. Knott, D.Sc.	3 3
Dynamics, Advanced Science (Mon., Wed., Fri.).....	16 Oct., 10 „		3 3
Astronomy (Mon., Tues. Wed. Thurs.)	16 Oct., 4 „	Prof. Copeland ..	3 3
Chemistry.....	15 Oct., 10 „	Prof. Crum Brown	4 4
Do. (Adv. Course, Tues. Wed. Thurs.)	7 Jan., 4 „		2 2
Practical Chemistry	25 Nov., 11 & 2 „	Prof. Ewart.....	3 3
Zoology <sup>4</sup> (Elementary)	15 Oct., 12 „		4 4

<sup>1</sup> Fees for second, third, and subsequent attendances, see page 65.<sup>2</sup> Students prior to attendance on the Class of Senior Mathematics or of Natural Philosophy as qualifying for Graduation in Arts, must have passed the Intermediate or Higher Standard Examination in Mathematics either as part of their Preliminary Examination or in addition thereto.<sup>3</sup> The first half of the Winter Graduation Course up to Christmas qualifies as a First Half-Course in Mathematics, and the second half, from Christmas to the end of the Session, as a Second Half-Course. Any First Half-Course, along with any Second Half-Course, taken subsequently, qualifies as a full Course of Instruction for Graduation.<sup>4</sup> With Practical Zoology, a full Course, but the whole Course must extend over at least seventy-five separate days. Any student whose attendance on the Elementary Course of Lectures and the Elementary Practical Class of Botany or Zoology does not entitle him to a full Certificate for Graduation in Arts, may make up the seventy-five attendances required on separate days, by attending twenty-five Lectures of any other Course in the Botanical or Zoological Department, as the case may be, without additional fee. A Full Course in Zoology is given in Winter but not in Summer.

## WINTER SESSION, 1901-1902—continued.

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees. <sup>1</sup>
III.—DEPARTMENT OF SCIENCE— <i>continued.</i>			£ s.
Practical Zoology } (Elementary)..... }	8 Jan. 12 o'cl. }	Prof. Ewart.... }	2 2 <sup>2</sup>
Advanced Zoological Laboratory..... }	... .. }		...
Morphology of Ver- tebrates (with Lab.) }	16 Oct., 2 ,, }	J. Beard, D.Sc.... }	3 3
Botany (Advanced) }	15 Oct., 11 ,, }	Prof. Balfour.. }	2 2 <sup>3</sup>
Practical Botany (Advanced)..... }	16 Oct., 11 ,, }		3 3 <sup>3</sup>
Geology..... }	15 Oct., 4 ,, }	Prof. Geikie... }	4 4
Practical Geol. and Min. (Graduation Half-Course) up to Christmas.... }	18 Oct., 2 ,, }		2 2
IV.—DEPARTMENT OF HISTORY AND LAW.			
History (Honours : British Constitl., 1360-1563)..... }	15 Oct., 4 o'cl. { ( <i>Mon., Tu., Th.</i> ) }	Prof. Kirkpat- rick..... }	3 3
History, British..... }	15 Oct., 11 o'cl. }	Prof. Lodge.... }	3 3
History (Honours Course, History of Europe, 1610- 1715)..... }	16 Oct., 10 ,, }		3 3
Constitutional Law and History <sup>4</sup> ..... }	15 Oct., 5 ,, }	Prof. Kirkpatrick	4 4
Roman Law..... }	15 Oct., 4 ,, }	Prof. Mackin- tosh..... }	4 4 <sup>5</sup>
History of Roman Law (44 <i>Class Meetings</i> ) <sup>6</sup> ..... }	... .. }		2 2
Ecclesiastical History	22 Oct., 11 ,,	Prof. Taylor.....	3 3

<sup>1</sup> Fees for second, third, and subsequent attendances, see page 65.<sup>2</sup> Besides charge of ros. for Laboratory Expenses.<sup>3</sup> Besides Garden fee of 5s.<sup>4</sup> Qualifying both for Arts Graduation (as "History," under the Arts Ordinance, Sect. VII., 2 (b), or as an optional or additional subject) and for Law Graduation. Two Half-Courses.<sup>5</sup> Fee for Winter Session. For Winter and Summer, £5, 5s.<sup>6</sup> Half-Course.

WINTER SESSION, 1901-1902—*continued.*

Classes.	Days and Hours.	Profs. and Lecturers.	Class Fees. <sup>1</sup>
IV.—DEPARTMENT OF HISTORY AND LAW— <i>continued.</i>			
Archæology and Art (History of).....	15 Oct., 3 o'cl.	Prof. Baldwin Brown .....	£ s. 3 3
Classical Archæology (Honours Course, <i>Mon., Wed., Fri.</i> )	16 Oct., 5 „		3 3
History in Monu- ments (Honours Course, <i>Tues. &amp; Thurs.</i> ).....	15 Oct., 5 „	Prof. Sir Ludo- vic Grant, Bart. ....	3 3 <sup>2</sup>
Public International Law (45 <i>Class Meetings</i> ) <sup>3</sup> .....	7 Jan., 2 „		2 2
European History, 1715-1848, Non- Graduation Course ( <i>Mon., Wed., Fri.</i> )	23 Oct., 11 „	D. P. Heatley..	2 2 <sup>2</sup>
Political Thought & Action in Britain since the Reforma- tion <sup>4</sup> ( <i>Mon. &amp; Thurs.</i> ).....	18 Nov., 12 „		1 1 <sup>2</sup>

## SUMMER SESSION, 1902.

The Classes will be opened as follows, and will be closed on Wednesday, 16th July.

Classes.	Days and Hours.	Profs. and Lecturers.	Class Fees. <sup>1</sup>
I. DEPARTMENT OF LANGUAGE AND LITERATURE.			
Senior Latin (Grada- tion Half-Course) <sup>5 6</sup>	1 May, 9 o'cl.	James Mill, M.A.	£ s. 2 2
Honours Latin (Gra- duction Half-Course)	1 May, 10 „		2 2
Senior Greek (Grada- tion Half-Course) <sup>5 6</sup>	1 May, 10 „	Alexander W. Mair, M.A.	2 2
Honours Greek (Gra- duction Half-Course)	1 May, 9 „		2 2

<sup>1</sup> Fees for second, third, and subsequent attendances, see page 65.

<sup>2</sup> Five Shillings entrance fee for non-matriculated students. See footnote 5, p. 58.

<sup>3</sup> Half-course. <sup>4</sup> Mackay Lectures. Free to members of the History Classes.

<sup>5</sup> See footnote 2, page 58.

<sup>6</sup> The full course may be completed by attendance either for another Summer Session or for half a Winter Session.



## SUMMER SESSION, 1902—continued.

Classes.	Days and Hours.	Profs. and Lecturers.	Class Fees. <sup>1</sup>
I. DEPARTMENT OF LANGUAGE AND LITERATURE—continued.			
English Literature (Honours Graduation Half-Course, <i>Mon., Wed., Fri.</i> )	1 May, 12 ,,	{ G. Gregory Smith, M.A.	£ 5. 2 2
Sanskrit <sup>2</sup> .....	1 May, 3 ,,	Prof. Eggeling.....	3 3
II. DEPARTMENT OF MENTAL PHILOSOPHY.			
Ancient Philosophy (Honours Graduation Half-Course(A), <i>Mon., Wed., Fri.</i> )	1 May, 11 o'cl.	{ R. P. Hardie, M.A.	{ 2 2
Psychology (Honours Gradn. Half-Course, <i>(Mon., Wed., Fri.)...</i> )	2 May, 12 ,,	{ Henry Barker, M.A.	{ 2 2
Political Philosophy, <sup>3</sup> (Honours Graduation Half-Course)..... <i>(Mon., Wed., Fri.)...</i>	2 May, 11 ,,		
Economics <sup>2 8</sup> ( <i>Tu., Th.</i> )	1 May, 11 ,,	A. B. Clark, M.A.	1 1
III. DEPARTMENT OF SCIENCE.			
Senior Mathematics (First Graduation Half-Course) <sup>4</sup> .....	1 May, 11 o'cl.	{ Chas. Tweedie, M.A., B.Sc.	{ 2 2
Senior Mathematics (Second Graduation Half-Course) <sup>4</sup> .....	1 May, 12 ,,		
Honours Mathematics (Gradn. Half-Course)	1 May, 10 ,,		
Physical Laboratory.....	1 May, 10 ,,	{ Prof. and Assistant.	{ 2 2
Physics ( <i>mainly for Students of Medicine</i> )	1 May, 12 ,,	Prof.	3 3
Elementary Dynamics...	1 May, 9 ,,	C. G. Knott, D.Sc.	2 2
Advanced Experimental Physics.....	1 May, 10 ,,	{ W. Peddie, D.Sc.	{ 2 2
Practical Chemistry .....	1 May, 2 ,,	Professor Crum	3 3
Chemistry (Organic).....	1 May, 1 ,,	Brown.	2 2
Zoology (Elementary) <sup>5</sup> ...	1 May, 12 ,,	{ Prof. Ewart <sup>1</sup> .....	{ 4 4
Do. (Elem. Pract.).....	1 May, <sup>6</sup> ,,		

<sup>1</sup> Fees for second, third, and subsequent attendances, see page 65.<sup>2</sup> Class for Indian Civil Service Probationers.<sup>3</sup> Honours Graduation Half-Course in Philosophy and also in Economic Science.<sup>4</sup> See footnotes 2 and 3, page 60.<sup>5</sup> See footnote 4, p. 60.<sup>6</sup> At hours to be arranged.<sup>7</sup> Besides charge of 10s. for Laboratory expenses.<sup>8</sup> Non-Graduation Course of twenty Lectures on Marshall's *Principles*.

SUMMER SESSION, 1902—*continued.*

Classes.	Days and Hours.	Profs. and Lecturers.	Class Fees. <sup>1</sup>
III. DEPARTMENT OF SCIENCE— <i>continued.</i>			£ s.
Advanced Zoology (Comp. Morphol. of Invertebrata and Adv. Lab. Course)..	1 May, 2 o'cl.	Prof. Ewart .....	3 3 <sup>3</sup>
Natural History Labor. Invertebrate Zoology..	1 May, "	{ J. H. Ashworth, D.Sc.	6 6 <sup>3</sup> 2 2
Do. (with Lab. work)	1 May, 8 "		3 3 <sup>3</sup> 4 4 <sup>5</sup>
Botany <sup>4</sup> .....	1 May, 8 "		
Practical Botany.....	1 May, 9 "	Prof. Balfour ...	2 2 <sup>5</sup>
Field Demonstra- tions on <i>Saturdays</i> .			
Geology (Graduation Half-Course, <i>Mon., Wed., Fri.</i> ).....	2 May, 4 "	Prof. Geikie .....	3 3
Field Demonstra- tions on <i>Saturdays</i>			
IV. DEPARTMENT OF HISTORY AND LAW.			
Brit. Hist. (Gen. and Const.) 1066-1832, Non-Gradn. Course	1 May, 9 o'cl.	D. P. Heatley...	2 2 <sup>6</sup>
Political Science (20 <i>Lectures</i> , Non-Gra- duation Course).....	2 May, 10 "		1 1 <sup>6</sup>

## TUTORIAL CLASSES.

Classes.	Days and Hours.	University Assistants.	Class Fees <sup>1</sup>
Junior Latin (Prelim- inary Class).....	1 May, 12	James Mill, M.A. ....	£ s. d. 2 2 0
Junior Greek (Prelimi- nary Class).....	1 May, 11	Alexander W. Mair, M.A.	2 2 0
Natural Philosophy (Advanced Hon- ours).....	1 May, 9	William Peddie, D.Sc.	2 2 0
Formal Logic (Prelim- inary Class, Fifteen <i>Lectures, Tues. and Thurs.</i> ).....	7 May, 12	R. P. Hardie, M.A.	1 1 0
Elementary Hebrew <sup>7</sup> ...	1 May, 10	{	1 11 6
Elementary Arabic... ..	1 May, 11		2 2 0

<sup>1</sup> Fees for second, third, and subsequent attendances, see page 65.<sup>2</sup> At hours to be arranged.<sup>3</sup> Besides charge of 10s. for Laboratory expenses,<sup>4</sup> With Practical Botany a full Course, but the whole Course must extend over 75 separate days. See footnote 4, page 60. The Course may be completed by extra attendances during the Autumn vacation.<sup>5</sup> Besides Garden Fee of 5s.<sup>6</sup> Five shillings University entrance fee for non-matriculated students. See footnote 5, page 58.<sup>7</sup> To prepare Students for entering the Junior Class in Winter Session.

FEEs FOR SECOND, THIRD, AND SUBSEQUENT ATTENDANCES.

1. *Ordinary Graduation Classes*:—(1) Second attendances on £4, 4s. Courses, £3, 3s. ; third or subsequent attendances, £1, 1s. (2) Second attendances on £3, 3s. Courses, £2, 2s. ; third or subsequent attendances, £1, 1s. (3) Ordinary Celtic Class, if not taken for Graduation, £2, 2s. ; second or subsequent attendances, £1, 1s.

2. Second attendances on £2, 2s. Lecture Courses (not being Honours Half-Courses), £1, 11s. 6d. ; third or subsequent attendances, £1, 1s.

3. When fee for first attendance is less than £2, 2s., no reduction for second or subsequent attendances.

4. *Honours Courses*:—(1.) *Full Honours* £3, 3s. Courses—Second attendances, no reduction ; third or subsequent attendances, £2, 2s. (2.) *Half-Honours* £2, 2s. Courses—Second attendances, no reduction ; third or subsequent attendances, £1, 1s.

5. No reduction for Laboratory or Practical Courses.

MATRICULATION, &c. See pages 27-29.

FIVE SHILLINGS UNIVERSITY ENTRANCE FEE—Classes to which applicable, pp. 29 and 30.

LABORATORIES.

The following means are afforded for Practical Instruction :—

THE PHYSICAL LABORATORY, established with the view of affording Students a practical knowledge of the construction and use of physical apparatus, and the mode of conducting experimental inquiries, is open daily from 10 to 3, under the superintendence of the Professor.

THE ROYAL OBSERVATORY is open to Students of Astronomy on Friday evenings from 8 P.M.

For the CHEMICAL LABORATORIES, ZOOLOGICAL LABORATORIES, ROYAL BOTANIC GARDEN LABORATORY, GEOLOGICAL AND PETROLOGICAL LABORATORIES, see Faculty of Science.

MUSEUMS. See pages 55-57.

## Courses of Lectures.<sup>1</sup>

1901-1902.

### I.—DEPARTMENT OF LANGUAGE AND LITERATURE.

#### HUMANITY—(Latin).

PROFESSOR HARDIE.

*Junior Class*—Taught by the Assistant, under supervision of the Professor: 9 to 10, five days a week, and Mondays and Wednesdays, 11 to 12. The work of the Class consists of—

1. Readings of some Latin author, such as Virgil, Horace, Ovid, or Tibullus, Livy, Sallust, and Cicero.
2. Lectures on Roman History or Literature.
3. Exercises in Latin Prose Composition.
4. Translation of passages from Latin into English, and from English into Latin "at sight."
5. Written Examinations.

*Books recommended.*—Bradley's Arnold's Latin Prose. Allen's Second Latin Exercise Book. Pelham's or How and Leigh's Roman History. Wilkins' Primer of Roman Literature. Wilkins' Primer of Roman Antiquities.

During the Winter Session 1901-1902 the following books will be read:—Livy, Bk. XXXVII.; Virgil, *Aeneid*, XII.; Cicero, *Pro Plancio*; Terence, *Adelphi*.

*Senior Class*—10 to 11, five days a week.

This is the class which qualifies for the ordinary Degree of M.A.<sup>2</sup> The work of the Class consists of—

1. Readings of some Latin author, such as Virgil, Horace, Cicero, Tacitus.
2. Lectures on Roman History or Literature.
3. Weekly Exercises in Latin Prose.
4. Translation of Unseen Passages.
5. Written Examinations.

<sup>1</sup> The annual amount payable for Matriculation, Class Fees, &c., of the regular Course in Arts and Graduation Fee may be estimated at about £10, 10s.

<sup>2</sup> See footnote 2, page 58.

# 6. Latin Verse Composition (voluntary).

*Books recommended.*—Gildersleeve and Lodge's Latin Grammar ; Lindsay's Historical Latin Grammar ; Potts' Hints towards Latin Prose Composition ; Pelham's Outlines of Roman History ; How and Leigh's History of Rome ; Capes' Early Empire ; Cruttwell's History of Latin Literature ; Mackail's Latin Literature ; Companion to Latin Authors (Middleton and Mills) ; Rich's Dictionary of Antiquities.

During the Winter Session 1901-1902 the following books will be read :—Virgil, *Eclogues* and *Aen.* II. ; Horace, *Odes*, II. ; Cicero, *Pro Murena*.

## *Third (Honours) Class—12 to 1.*

The Third (Honours) Latin Class meets four days a week. It is intended to assist the studies of Candidates for Scholarships and Graduation with Honours. The work consists of—

1. Readings and explanations of the more difficult Latin authors, such as Tacitus, Lucretius, Plautus, Martial, &c.
2. Lectures on Roman History and Literature, chiefly in connection with the Books read in the Class.
3. Composition, and Translation of Unseen Passages.
4. Occasional Critical Papers and Essays.
5. Written Examinations on the work done in the Class.

During the Winter Session 1901-1902 the following books will be read :—Plautus, *Trinummus* ; Quintilian, X. ; Lucretius, V. ; Tacitus, *Annals*, I., II.

## *Summer Session, 1902.*

JAMES MILL, M.A., *Lecturer.*

## *Senior Class—9 to 10, five days a week.*

This class qualifies as a half-course for Graduation.<sup>1</sup> The work consists of—

1. The reading of the Latin authors prescribed for the Degree Examination in October 1902 and April 1903.
2. Lectures on Roman History or Literature.
3. Exercises in Latin Prose Composition.
4. Written Examinations on the work done in the Class.

<sup>1</sup> See footnote 2, page 58.



5. Translation of passages from Latin into English, and from English into Latin "at sight."

The full Course may be completed by attendance either for another Summer Session or for half a Winter Session.

*Third (Honours) Class—10 to 11.*

This Class, in the Summer Session, qualifies as a half-course for Graduation with Honours in Classics. It meets four days a week, and is intended to assist the studies of Candidates for Scholarships, for Graduation with Honours, and for the Indian Civil Service. The work consists of:—

1. Readings and explanations of some of the more difficult Latin authors, such as Tacitus, Lucretius, Plautus, Martial, Juvenal, Lucan, &c.

2. Lectures on Roman History and Literature, chiefly in connection with the Books read in the Class.

3. Exercises in Latin Prose Composition.

4. Written Examinations on work done in the Class, and on subjects prescribed for voluntary reading.

During the Summer Session of 1902, the books read will be selected from the programmes of work for Honours Graduation in April 1903 and April 1904.

*Tutorial Class.*

This Junior Class is intended for students preparing for the Preliminary Examination in October, and the work will be selected with that view. Special attention is directed to Latin Prose Composition, one exercise being done with the Class daily, and two written exercises done and corrected in each week.

GREEK.

PROFESSOR BUTCHER.

*Junior Class*—Taught by the Assistant, under supervision of the Professor : 10 to 11 o'clock, five days a week, and 11 to 12 on Tuesdays, Thursdays, and Fridays. The work consists of—

1. Readings of some Greek author, as Xenophon, Lucian, Plato

(an easy dialogue), Homer, Euripides, or Aristophanes (selections).

2. Lectures on Greek History or Literature.
3. Exercises in Greek Prose Composition.
4. Translation of Unseen Passages.
5. Written Examinations.

*Books recommended.*—W. G. Rutherford's Greek Grammar, and First Greek Syntax; Goodwin's Greek Grammar; F. E. Thompson's Homeric Syntax; Jebb's Primer of Greek Literature; Oman's Elementary History of Greece; Oman's History of Greece, or Cox's General History of Greece, or W. Smith's Smaller History of Greece (new ed. 1897).

*Senior Class*—II to 12, five days a week.

This is the class which qualifies for the ordinary Degree of M.A.<sup>1</sup> The work consists of—

1. Readings of some Greek author, such as Thucydides, Demosthenes, Herodotus, Plato; Homer; a play of Aeschylus, Sophocles, Euripides, or Aristophanes.
2. Lectures on Greek Literature, History, or Philosophy.
3. Greek Prose Composition, or Translation of an Unseen Passage once a week, and a Lecture on the passage when the exercises are returned.
4. Written Examinations on the work done in the Class, and on subjects prescribed for voluntary reading.
5. Greek Verse Composition (voluntary).

*Books recommended.*—W. G. Rutherford's Greek Grammar, and First Greek Syntax; Monro's Homeric Grammar; Goodwin's Greek Grammar; Goodwin's Greek Moods and Tenses; Sidgwick's Greek Prose Composition; Jebb's Primer of Greek Literature; Müller and Donaldson's History of Greek Literature; Jevons' History of Greek Literature, or Mahaffy's History of Greek Literature, or Murray's Ancient Greek Literature; Holm's History of Greece (Translation, Macmillan); Bury's History of Greece, Oman's History of Greece, or Cox's General History

<sup>1</sup> See footnote 2, page 58.

of Greece, or W. Smith's *Smaller History of Greece* (new ed. 1897); *Greek Verse Composition* (Sidgwick and Morris); *A Manual of Comparative Philology*, by Giles.

During the Winter Session 1901-1902, the following books will be read :—Homer, *Odyssey*, XVII. ; Demosthenes, *Androtion*.

*Third (Honours) Class—10 to 11.*

This Class meets four days a week. It is intended to assist the studies of Candidates for Scholarships and Graduation with Honours. The work consists of—

1. Readings and explanations of some of the more difficult Greek authors, such as Thucydides, Demosthenes, Plato, Aristotle, Aeschylus, Pindar, &c.
2. Lectures on Greek Literature, History, or Philosophy.
3. Greek Composition, and Translation of Unseen Passages.
4. Occasional Critical Papers and Essays.
5. Written Examinations on the work done in Class.

During the Winter Session 1901-1902 the chief work of the Class will be Homer, *Iliad*, I.-XII. ; Aristotle, *Poetics*.

*Summer Session, 1902.*

ALEXANDER W. MAIR, M.A., *Lecturer.*

*Senior Class—10 to 11, five days a week.*

This Class qualifies as a half-course for Graduation.<sup>1</sup> The work consists of—

1. The reading of the Greek authors prescribed for the Degree Examination in October 1902 and April 1903.
2. Lectures on Greek History or Literature.
3. Greek Prose Composition, and Translation of Unseen Passages.
4. Written Examinations.

The full Course may be completed by attendance either for another Summer Session or for half a Winter Session.

*Third (Honours) Class—9 to 10.*

This Class meets four days a week. It is intended to assist

<sup>1</sup> See footnote 2, page 58.

the studies of Candidates for Scholarships, for Graduation with Honours, and for the Indian Civil Service. The work consists of—

1. The reading of books selected from the programme of work for Graduation with Honours in 1903 and 1904, and other books as may be arranged.

2. Lectures on Greek History or Literature.

3. Greek Prose Composition, and Translation of Unseen Passages.

4. Written Examinations.

This Class qualifies as a half-course for Graduation with Honours. The full Course may be completed by attendance either for another Summer Session or for half a Winter Session.

*Junior (Tutorial) Class*—11 to 12, five days a week.

This Class is intended for Students preparing for the Preliminary Examination in October next, and the work to be done will be selected with that view.

## CLASSICAL ARCHÆOLOGY.

PROFESSOR BALDWIN BROWN.

Classical Archæology may be taken as one of the optional subjects for Honours in Classics.

An Honours Course of fifty lectures will be delivered in the Winter Session, 1901-1902, in the Fine Art Class Room, on Mondays, Wednesdays, and Fridays, at 5 P.M.

Additional Class-meetings of a tutorial character will be held as often as is found desirable, at hours to be afterwards arranged. The treatment of the subject will embrace—

1. A general survey of the field of study.

2. An examination of the most important monuments of Greek Art and selected passages from ancient authors bearing on the History of the Arts in Classical times.

3. A study of the History of Greek Sculpture from the earliest times to the age of Augustus.

The text-books will be—Overbeck's "Schriftquellen" (a collection of passages from ancient authors bearing on Classical Art); Murray's "Handbook of Greek Archæology" (London, John Murray); E. Gardner's "Handbook of Greek Sculpture" (Macmillan & Co.).

The themes will be treated from the artistic standpoint, which is now more and more insisted on by writers on this subject. A high degree of accuracy and considerable acquaintance with the chief Greek and Latin authorities will be required of Candidates for Honours, but no previous special knowledge either of Art or of Archæology will be expected of those joining the Class. The different branches, so far as time permits, will be opened up from the beginnings, and students will be assisted in the Tutorial Classes to understand technical terms and to appreciate the artistic points which come up for discussion in the Lectures. They will also have access at suitable times to the collection of illustrations referred to in the Lectures, and to the Class Library, which contains some of the standard works on the subject.

#### ANCIENT PHILOSOPHY.

(See Department of Mental Philosophy.)

#### RHETORIC AND ENGLISH LITERATURE.

PROFESSOR SAINTSBURY.

*(Ordinary Course, 4 to 5, five days a week throughout the Winter Session.)*

On Mondays, Wednesdays, and Fridays, the Lectures will be devoted, before Christmas, to a survey of Style both in Poetry and Prose from Chaucer to the Nineteenth Century; after Christmas to a similar survey of the General History and Contents of the Subject from the earliest texts to the present day. There will be Three Class Examinations during the Session, and at convenient intervals between them written Exercises will be done in Class. Two subjects for longer written Essays will also be given, one before, one after Christmas:



and there will be Prizes for these Essays, distinct from the general Class Prizes. A certain number of Lectures will be specially devoted to the subject of Rhetoric, the text being De Quincey's Essay, with Campbell's *Philosophy of Rhetoric*, Whately's *Rhetoric*, Bain's *Composition and Rhetoric*, and Hodgson's *Errors in English* for illustration.

On Tuesdays and Thursdays the Lectures will take for text the books prescribed for the year, some of which will be read page by page and line by line, while others will be dealt with more summarily. The prescribed books will always include parts of Chaucer, Spenser, Shakespeare, and Milton, together with portions of other writers from the sixteenth century to the present day. The Lectures on Style will be illustrated from Ward's *Poets* and Craik's *Prose Selections*.

*(Honours Course, 2 to 3, three days a week in the Winter Session.)*

The Professor will also give an Honours Course in two Halves of twenty-five Lectures each. The Half-Course before Christmas will be a Higher Rhetoric Course on the Theory of Prose and Verse in English, opening with a sketch of the History of Literary Criticism from Aristotle onwards. The course after Christmas will be devoted to some special subject connected with the Honours period of the year. The subject for 1902 will be "The English Drama from Jonson to Farquhar"; for 1903, "The English Novel."

*Honours Courses.*

G. GREGORY SMITH, M.A., *Lecturer.*

OLD AND MIDDLE ENGLISH.

A full Honours Course of Fifty Lectures (in two parts of Twenty-five Lectures each) on Old and Middle English will be delivered in the Winter Session.

A.—HISTORY OF OLD AND MIDDLE ENGLISH.

The work of this Class (Monday, Wednesday, and Friday from 3 to 4, beginning Friday, 18th October) will consist of—

1. An Historical Outline of the Development of the English

Language (Phonetics, Accidence, Syntax, and Vocabulary). Special attention will be given to the Dialects.

## 2. English Palæography.

*Books for reference.*—Sweet's *Oldest English Texts and History of English Sounds*; Ellis's *Early English Pronunciation*; Sievers's *Old English Grammar* (ed. Cook); Kellner's *Historical Outlines of English Syntax*; Skeat's *Principles of English Etymology* (First and Second Series); Oliphant's *Old and Middle English*; Murray's *Dialect of the Southern Counties of Scotland* (Introduction); Skeat's *Facsimiles of Old English Manuscripts*; Maunde Thompson's *Greek and Latin Palæography* (chaps. xvii.-xix.).

## B.—OLD AND MIDDLE ENGLISH TEXTS.

The work of this Class (Monday, Wednesday, and Friday from 3 to 4, beginning Wednesday, 8th January) will consist of (a) Readings in Old and Middle English, including some of the texts prescribed for the Examination for the Honours Degree, and (b) Translation of Unseen Passages.

*Summer Session, 1902.*

## ENGLISH LITERATURE.

An Honours Half-Course of Twenty-five Lectures on the Literary Principles of the Eighteenth Century.

The Class will meet on Monday, Wednesday, and Friday from 12 to 1.

## FRENCH LANGUAGE AND LITERATURE AND ROMANCE PHILOLOGY.

CHARLES SAROLEA, PH.D., LITT.D., *Lecturer.*

*Ordinary Graduation Class*—3 to 4, five times a week.

This class qualifies for the Ordinary Degree of M.A.<sup>1</sup> The work consists of—

1. Readings of some French author, such as Rousseau, Voltaire, Chateaubriand, Victor Hugo.

2. Lectures on French Literature or History.

<sup>1</sup> See footnote 2, page 58.

3. French Prose Composition, or Translation of an unseen passage once a week, and a lecture on the passage when the exercises are returned.

4. Written Examinations on the work done in the Class, and on subjects prescribed for voluntary reading.

5. Lectures on the Philology and Historical Development of the French language.

Books to be read during the Winter Session 1901-1902 :— Clédât, *Moyen-Age*; Brachet, *Morceaux choisis du 16<sup>e</sup> Siècle*; Corneille, *Cinna*; Molière, *Misanthrope et Femmes Savantes*; Marcou, *Prosateurs français*; Lanson, *Lettres choisies du 17<sup>e</sup> Siècle*; Lanson, *Lettres choisies du 18<sup>e</sup> Siècle*; Victor Hugo, *Extraits* (Poésie); Taine, *Notes sur l'Angleterre*; Augier, *Le Gendre de M. Poirier*; *Annales Politiques et Littéraires*.

#### *Honours Class—4 to 5.*

The Honours French Class meets four days a week. It is intended to assist the studies of Candidates for Scholarships and Graduation with Honours. The work consists of—

1. Readings and explanations of Old French Texts, and of some of the more difficult Modern French authors.

2. Lectures on French Literature or History, and on Romance Philology.

3. French Composition and Translation of unseen passages.

4. Occasional critical papers and essays.

5. Written Examinations on the work done in the Class, and on subjects prescribed for voluntary reading.

Books to be read during the Session 1901-1902 :— Saint-Simon, *Mémoires*; Montaigne, *Essais*; *Chanson de Roland*; Rousseau, *Contrat Social*; Victor Hugo, *Année Terrible*; Faguet, *Politiques et Moralistes*; Taine, *Angleterre*.

### ITALIAN LANGUAGE AND LITERATURE AND ITALIAN PHILOLOGY.

*Course of Fifty Lectures on the Honours Standard.*

CHARLES SAROLEA, PH.D., LITT.D., *Lecturer.*

This Class meets three days a week. The work consists of—

1. Readings and explanations of Italian Classics of the 14th and 16th century (with special regard to Dante), and of some of the more difficult modern Italian authors.

2. Lectures on Italian Literature and History, and on Italian Philology.

3. Occasional critical Papers and Essays.

4. Written Examinations on the work done in the Class, and on subjects prescribed for voluntary reading.

Books to be read during the Session 1901-1902 :—Dante, "Divina Commedia," "De Monarchia"; Manzoni, "I promessi Sposi"; Leopardi, Prose; D'Ancona, "Manuale della Letteratura italiana."

Students who desire to attend this Course are requested to send their names to Dr Sarolea, University, before 1st October.

## GERMAN LANGUAGE AND LITERATURE AND TEUTONIC PHILOLOGY.

OTTO SCHLAPP, PH.D., *Lecturer.*

*Ordinary Graduation Class*—4 to 5, five times a week.

This class qualifies for the Ordinary Degree of M.A.<sup>1</sup> The work consists of—

1. Interpretation of some Middle High German and Sixteenth Century Texts, and of such modern German authors as Winckelmann, Klopstock, Lessing, Herder, Goethe, Schiller, Heine, Uhland, Freytag, Riehl, and Storm.

2. Lectures on German Literature or History.

These lectures, the subject of which will be announced in due time, will be delivered *in German* on Fridays, and may be taken as a separate course on payment of a Class Fee of One Guinea, and in the case of non-matriculated students of an additional Five Shillings University Entrance Fee.<sup>2</sup>

3. German Prose Composition, or translation of an unseen

<sup>1</sup> See footnote 4, page 59.

<sup>2</sup> Members of the Honours Class may attend free of charge.

passage, or a critical paper or German essay at least once a week, and a lecture on the papers when returned.

Twenty Class Meetings (on Wednesdays) will be devoted to German Prose Composition, and may be taken as a *separate course* on payment of a Class Fee of One Guinea, and in the case of non-matriculated students, of an additional Five Shillings University Entrance Fee.<sup>1</sup>

4. Written Examinations on the work done in the Class, and on subjects prescribed for voluntary reading.

5. Lectures on the Philology and Historical Development of the German Language.

During the Winter Session 1901-1902, the following texts will be read or interpreted:—Nibelunge; Brant; Egmont; Jungfrau von Orleans; Deutsche Lyrik.

*Honours Class—3 to 4.*

The Honours German Class meets four days a week. It is intended to assist Candidates for Scholarships and Graduation with Honours. The work of this Class is carried on in *German*, and consists of—

1. Interpretation of Gothic, of Old, Middle, and Early Modern High or Low German Texts, and of some of the more difficult modern authors.

2. Lectures on German Literature or History.

3. German Composition, Translation of unseen passages, occasional critical papers and German essays, and a lecture on the papers when returned.

Twenty Class meetings (on Wednesdays) will be devoted to advanced German Prose Composition, and may be taken as a *separate course* on payment of a Class Fee of One Guinea, and in the case of non-matriculated students of an additional Five Shillings University Entrance Fee.

4. Written Examinations on the work done in Class, and on subjects prescribed for voluntary reading.

5. Lectures on the Philology and History of the German Language.

<sup>1</sup> Non-matriculated students taking this class must be at least eighteen years of age.



During the Session 1901-1902 the following texts will be interpreted :—*Gotische Sprachdenkmäler*; *Althochdeutsche Literatur*; Nibelungen, Klopstock, Winckelmann, Herder, Schiller's *Briefe* and *Gedichte*, Tasso, Reuter.

## SANSKRIT AND COMPARATIVE PHILOLOGY.

PROFESSOR EGGELING.

### A.—SANSKRIT LANGUAGE AND LITERATURE.

1. *Junior Class*.—Grammar and Exercises. Easy Texts (from Lanman's Reader). Easy translations from English into Sanskrit.

2. *Senior Class*.—Repetition of Grammar. Translations from English into Sanskrit. Texts, such as the Hitopadeśa, Kālidāsa's Raghuvansā or Śakuntalā; Mricchakatikā; Manu's Institutes of Law; selected Hymns of the Rigveda (Lanman's Reader).

The Senior Class will be the Graduating Class in Sanskrit for the Ordinary M.A.; but those who attend with a view to Graduation must previously have passed an examination under Sect. IV., subs. 3 of the Ordinance, which will include plain passages for translation from and into Sanskrit, and grammatical questions.

Those who propose, in a subsequent session, to take up Sanskrit as a graduation subject, may attend the Junior Class during the Session 1901-1902.

### B.—COMPARATIVE PHILOLOGY.

During the Session 1901-1902, the Professor will be prepared to deliver a course of Fifty Lectures on the Principles of Indo-European Philology and the history of Linguistic Studies, provided a sufficient number of Students give in their names.

## HEBREW AND SEMITIC LANGUAGES.

PROFESSOR KENNEDY.

See Courses under Faculty of Divinity.

*Arts Students are strongly advised to begin their study of Hebrew and Arabic by taking the Summer Tutorial Classes.*

The Class of Senior Arabic, which meets three times a week, has been recognised by the University Court as a half-course qualifying for Graduation in Arts. It will meet in two successive (instead of in alternate) Sessions, when required, to suit the convenience of intending Graduates.

### CELTIC.

PROFESSOR MACKINNON.

The Course for 1901-1902 will be arranged as follows :—

1. *Lectures.*—During the Session a course of fifteen to twenty lectures will be delivered on The History and Literature of the Gael, from 1000 A.D. to 1560, and a similar course on Celtic Grammatical forms.

2. *Reading and Exposition.*—(1) Scottish Gaelic : Extracts for Reading, Part II.; Stewart's Grammar. (2) Irish Gaelic : Keating's Three Shafts of Death ; O'Donovan's Grammar. (3) Old Gaelic : Extracts for Reading, Part II. ; Windisch's Grammar and *Irische Texte*.

3. *Translations from English into Modern and Old Gaelic.*

Any student who attends this Class with a view to Graduation in Arts must previously have passed an examination (under Sect. IV., subs. 3 of the Ordinance), which will be in Scottish Gaelic, or Irish Gaelic, or Welsh ; and will include translations from and into English, with grammatical, literary, and easy philological questions.

The fee for a Student who attends with a view to graduation is £3, 3s.

An Advanced Class will meet in the Winter Session, 1901-1902, on Monday and Friday, at 3 P.M. The Class will read Old Gaelic Texts from print and manuscript.—Fee, £1, 1s.

A Gaelic Class for Junior students will meet in the Winter Session 1901-1902, Tuesday, Wednesday, and Thursday, at 3 P.M. Students will read Modern Scottish and Irish Gaelic, and commence the study of Old Gaelic. Grammar and Exercises.—Fee for this class, £1, 1s.

*Text-Books.*—Extracts for Reading, Parts I. and II. ; Stewart's and Joyce's Grammar ; Windisch's Grammar.

*II.—DEPARTMENT OF MENTAL PHILOSOPHY.*

## LOGIC AND METAPHYSICS.

PROFESSOR A. S. PRINGLE PATTISON.

*Logic and Psychology—Ordinary Class—1 to 2.*

The course in this class falls into three parts :—

(1) Elements of Logic, Deductive and Inductive; (2) Outline of the main facts of Empirical Psychology, dealing more particularly with the facts and processes of cognition; (3) Introduction to the questions of philosophy, with reference to the history of philosophy ancient and modern.

1. In the Logical part of the course the text-book used is Jevons' "Elementary Lessons in Logic."

It is extremely desirable that students, before entering the class, should have familiarised themselves with the main doctrines of Formal Logic; and a tutorial class (Fifteen Lectures) for those who desire it is held in summer by Mr Hardie, Assistant to the Professor. An examination is held about a fortnight after the opening of the Winter Session to test the knowledge of the class. It embraces the first seventeen Lessons in Jevons with the exception of Lessons 4, 6, 7, 10, 11, and 13; for Lesson 10 students should substitute a printed chapter which they may obtain on application at the Matriculation Office. For those who fail to reach a reasonable standard in this examination, separate tutorial meetings will be held during the early part of the session.

2. In the Psychological division of the course no text-book is prescribed, but frequent reference is made to the leading works on the subject, and a Handbook such as Stout's "Manual," James's "Text-book," Sully's "Outlines," Höffding's "Outlines," or Baldwin's "Elements," may be usefully read in connection with the lectures.

The lectures cover the chief topics of the Psychology of Cognition, with the Psychology of the Feelings and the Will in outline.

3. The Philosophical lectures give a sketch of the development of speculative thought in Ancient Greece and then pass to the beginnings of Modern Philosophy. Bacon, Descartes, Locke, Berkeley, and Hume are studied in succession.

Professor Fraser's "Selections from Berkeley" and certain chapters of Locke's "Essay" and Hume's "Enquiry" are used in connection with the lectures as an introduction to the problems of modern philosophy.

*Metaphysics and History of Philosophy—Honours Class—4 to 5.*

This Class, an Honours Course of Fifty Lectures, is intended for those who have attended the ordinary course, or have otherwise some acquaintance with philosophy. The lectures deal in a more advanced way with the chief systems of modern philosophy, special attention being devoted to Spinoza and Kant. Guidance is also given in the study of Advanced Psychology, and some of the Lectures deal with the problems of Advanced Logic.

Lectures on Greek Philosophy are delivered as a part of this Course by Mr Hardie, Assistant to the Professor and Lecturer in Logic and Metaphysics.

The Class meets on Tuesday and Thursday throughout the Session, and during part of the Session at a separate hour for the Lectures on Greek Philosophy.

*Summer Session, 1902.*

R. P. HARDIE, M.A., *Lecturer.*

*Honours Course in Ancient Philosophy.*

This constitutes a Half-Course qualifying for Honours in Mental Philosophy and in Classics.

*Subjects.*—Pre-Socratic Philosophy, Plato and Aristotle.

*Books specially referred to.*—Ritter and Preller, *Historia Philosophiae Graecae* (7th ed.), Sections 1-173; Plato, *Phaedo*, *Republic*; Aristotle, *Organon* (as in Trendelenburg, *Elementa Logices Aristoteleae*); *Physics*, I., II.; *De Anima*, I. i., II. i.-vi., xii., III. i.-v.; *Meta.* I.

Four or five lectures will be given each week and the lectures

will be arranged so that students will be able to select the subjects they require. Probably during each week of May two lectures will be given on pre-Socratic Philosophy and two on Aristotle's *Physics*, I., II., and during each week of June two on Plato and two on Aristotle's *De Anima*.

*Tutorial Class in Elementary Logic.*

This Course of Fifteen Lectures on Logic is intended to prepare Students for the Ordinary Class of Logic and Metaphysics.

MORAL PHILOSOPHY.

PROFESSOR JAMES SETH.

*Ordinary Class—2 to 3.*

After an introductory statement of the problem and method of Ethics, a sketch of the development of moral ideals in primitive, ancient, and modern times will be given, with the object of awakening reflection upon the central question of ethical science—the nature of the Moral Ideal. The investigation of this question will occupy the larger part of the course, and will be based partly upon a psychological study of the moral nature, but mainly upon a critical study of the chief systems of Ethics, in the light of their historical development. The application of the general principle thus reached to the regulation of the moral life, individual and social, will next be considered, special attention being given to the ethical basis and functions of the State, and to some of the more concrete aspects of current morality. The course will close with a discussion of the metaphysical implications of ethical theory, more particularly the question of Freedom.

The Course will consist of lectures, discussions, written examinations and essays. The text-book will be the Professor's *Ethical Principles*, and a special study will be made of Butler's *Sermons on Human Nature*, Mill's *Utilitarianism*, and Spencer's *Data of Ethics*. Sidgwick's *History of Ethics* should also be studied in connection with the lectures. A short course of



lectures on portions of Aristotle's *Ethics* will be given by the Assistant to the Professor.

*Honours Class—4 to 5.*

This Course of Fifty Lectures is intended for those who have attended the Ordinary Class, or have otherwise obtained a general knowledge of Moral Philosophy. The work of the class will consist of a study, by lectures and discussions, of Greek Ethics, especially Plato's ethical dialogues and Aristotle's *Ethics*.

Lectures on Kant's *Critique of Practical Reason* and Hegel's *Philosophy of Right* will be given as a part of the Honours Course by the Assistant to the Professor

*Summer Session, 1902.*

HENRY BARKER, M.A., *Lecturer.*

*Honours Courses in Political Philosophy and Psychology.*

One or both of the following half-courses will be given, if desired by a sufficient number of students :—

1. A half-course in Political Philosophy, qualifying for Honours in Philosophy and Honours in Economic Science. This course is intended for students who propose to take Honours in Philosophy with Political Philosophy as a special subject, or Honours in Economic Science. The lectures will deal with topics selected from the following list :—

(1) Scope and method of political philosophy—relation to ethics, economics, and history. (2) General theory of political obligation ; nature and basis of the State. (3) Particular theory of rights and obligations, and the related functions of the State. (4) Structure and forms of government. (5) History of political philosophy.

Special attention will be given to the works in Political Philosophy prescribed or recommended for Honours in Philosophy and in Economic Science.

2. A half-course in Psychology qualifying for Honours in Philosophy. In this course some of the more difficult and disputed topics of psychology will be discussed, especially those which are of philosophical and ethical interest ; and some

account will be given of experimental problems and results. Special attention will be given to the works in Psychology prescribed or recommended for Honours.

## COMMERCIAL AND POLITICAL ECONOMY AND MERCANTILE LAW.

PROFESSOR NICHOLSON.

The Course, embracing two Half-Courses of Fifty Lectures each, qualifies for Graduation in Arts and for Graduation in Law (optional with Conveyancing).

In connection with the Lectures students are expected to read the portions indicated in the Lectures of Mill's *Political Economy*, Bks. I. to III. ; Marshall's *Economics of Industry* ; Smith's *Wealth of Nations*, Bk. IV. ; and the Professor's "Treatise on Money," 5th edit. For fuller treatment of the subjects of the Lectures students may consult the Professor's "Principles of Political Economy," Bks. I. to III.

1. SCOPE AND METHOD OF POLITICAL ECONOMY.—Analysis of Fundamental Conceptions, Wealth, Utility, Total and Marginal Utility, Capital, Labour, &c.

2. PRODUCTION OF WEALTH. — Meaning of Production — Agents of Production—Land Labour and Capital—Efficiency of Labour—Division of Labour—Organisation of Industry—Production on a Large and Small Scale — Accumulation of Capital—Growth of Population—Limits to the Production of National Wealth.

3. DISTRIBUTION OF WEALTH.—Private Property—Socialism —Land Tenures — Wages—Profits—Rents—Combinations of Labour and Capital.

4. EXCHANGE.—Theory of Value—Demand and Supply—Cost of Production—Money—Banking Credit—Rate of Interest —Commercial Crises—Foreign Trade—Free Trade—Foreign Exchanges.

5. PRINCIPLES OF GOVERNMENTAL CONTROL AND TAXATION.—An Elementary Treatment of the Leading Principles.

Four written Examinations and Two Essays. Essays Voluntary.

*Honours Class*—(Fifty Lectures, 3 to 4, Mondays, Tuesdays, Thursdays).

Half of the Course will be mainly devoted to British Economic History, and Half to more difficult Economic Theories with special treatment of the Economic Functions of Government and the Principles of Public Finance. The two Half-Courses may be taken separately.

As preparatory to the Course, students are recommended to read — Cunningham's "Growth of English Industry and Commerce," Bastable's "Public Finance," and the Professor's "Principles of Political Economy."

*Summer Session, 1902.*

*Lecturer*—ARCH. B. CLARK, M.A., *University Assistant.*

ECONOMICS (Tuesdays and Thursdays, at 11).

In this Course of Twenty Lectures the leading principles involved in Professor Marshall's treatment of Economics will be discussed. The Course is intended as preparatory for students reading with a view to Graduation with Honours in Economic Science, and for candidates for the India Civil Service.

*Text Book*: Marshall's "Principles of Economics," and, for reference, Nicholson's "Principles of Political Economy," Vol. II., and Pantaleoni's "Pure Economics."

## THEORY, ART, AND HISTORY OF EDUCATION.

PROFESSOR S. S. LAURIE.

### I. THEORY, OR PHILOSOPHY OF EDUCATION.

#### A.—THE END AND MATERIALS OF EDUCATION.

The Possibilities and Limits of Education. The End of Education. The relation of the School to this End. The Educative Process, generally, whereby the End is attained.

Materials or Subjects of Instruction conducive to the attainment of the End, and the carrying out of the Process. Definition

of the materials of instruction in their school sense. Distinction of Real and Formal, Humanistic and Naturalistic, subjects. Relative value of subjects for instruction and discipline respectively. Practicability of the School Curriculum.

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*Material conditions of the life and growth of Mind, i.e. Physiology and its Educational Lessons.*

### B.—PHILOSOPHY OF EDUCATION, *i.e.*

*Applied Psychology and Ethics.*—I. Rational Psychology : its educational relations fully treated. Periods of Mental Growth. Methodology or the Principles and Rules of the Art of Instruction which the Rational Psychology yields.

2. Psychology of the Ethical Nature of Man in its educational relations. The Real of Morality (Instruction and Training) ; the Formal in Morality (Discipline to Duty).

### II. ART OF EDUCATION OR APPLICATION OF PRINCIPLES AND RULES.

A.—*Intellectual.*—*Rules of the Art, i.e. Method in Intellectual Instruction, Training, and Discipline.*—Analytic exposition of the Rules, showing their derivation from Rational Psychology. Application of the Rules to teaching of—

(1) Real-Naturalistic subjects, *e.g.* Object-lessons, Nature-knowledge, Elementary Science, Geography, &c., &c.

(2) Real-Humanistic subjects, *e.g.* Language, Literature, Economics, History, &c.

(3) Formal subjects, *e.g.* Arithmetic, Geometry, Grammar, Foreign Languages, &c.

B.—*Ethical.*—*Rules of the Art, i.e. Method in Moral Training and Discipline.*—Motives. The Authority of the Teacher. The meaning of Authority. The nature and conditions of its exercise. Punishments, Rewards, and school discipline generally.

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Organisation of a School. Organisation of a State-system. Ideas governing Primary, Secondary, and University Instruc-

tion respectively. The Manual and the Technical in Instruction. School appliances. Manipulation of a Class. The Teacher.

### C.—HISTORY OF EDUCATION AND OF THEORIES.<sup>1</sup>

*Pre-Christian Education*—1. Education in Ancient Egypt. 2. Education among the Semitic Races. 3. Education of the Hindu Races. 4. The Education of the Ancient Persians. 5. Education among the Hellenic Races. The educational views of Plato and Aristotle. 6. Education among the Romans. 7. The Institutions of Quintilian. 8. Plutarch.

*Christian Education*—1. The decay of the Romano-Hellenic, and the rise of Christian, Education. 2. The Cathedral and Monastery Schools. 3. The Rise of Universities.

*The Renaissance*—1. Humanism as represented by Vittorino da Feltre, Elyot, Rabelais and Montaigne, Erasmus, Colet, Luther, Melancthon, John Sturm, Roger Ascham. Exposition of "The Scholemaster." The Jesuits.

*The Modern Movement*—1. Lord Bacon. 2. Ratichius. 3. Comenius. 4. Milton. 5. Analysis and exposition of John Locke's "Thoughts on Education," and the "Conduct of the Human Understanding." 6. Rousseau. 7. Pestalozzi, Jacotot, Fröbel, &c. 8. Dr Andrew Bell and Joseph Lancaster. 9. Dr Arnold. 10. Herbert Spencer and contemporary Utilitarian Realism.

*Note.*—The books to be thoroughly studied during the Session, apart from the Lectures, are Comenius' *Didactic*, and the Professor's book on "Language and Linguistic Method," *third edition*. The "Institutes of Education" must also be in the hands of the student, *second edition*. *Four written Examinations will be held during the Session, and Three Essays on educational principles or method called for.*

PRACTICE IN TEACHING.—Arrangements are made at the Training Colleges for securing training in the *Practice of Teaching* to the extent of the requirements of the University

<sup>1</sup> In 1901-1902 the Lectures will be confined to the period from 1350 to 1700 A.D., i.e. the Renaissance and the Modern Period.



Schoolmaster's Diploma now recognised by the Education Department. Fee for this, £1, 1s. The School Board admit Diploma Candidates to the Royal High School, and the Heriot Governors and Merchant Company have also kindly thrown open their Secondary Schools for those who are going in for the higher Diploma.

## PHILOSOPHY OF LAW

PROFESSOR SIR LUDOVIC GRANT, BART.

This Course of Forty-five class meetings, commencing on Tuesday, 15th October 1901, at 2, will qualify as a half-course for graduation. *Vide under Faculty of Law.*

## GIFFORD LECTURES ON NATURAL THEOLOGY.

*Lecturer*—PROFESSOR JAMES, OF HARVARD UNIVERSITY.

These Lectures were endowed by the late Adam Gifford, Senator of the College of Justice, "for promoting, advancing, teaching, and diffusing the study of Natural Theology in the widest sense of that term." . . . "The lecturers appointed shall be subjected to no test of any kind, and shall not be required to take any oath, or to emit or subscribe any declaration of belief, or to make any promise of any kind; they may be of any denomination whatever, or of no denomination at all; they may be of any religion or way of thinking, or, as is sometimes said, they may be of no religion; or they may be so-called sceptics or agnostics or free-thinkers;—provided only that the 'patrons' will use diligence to secure that they be able reverent men, true thinkers, sincere lovers of and earnest inquirers after truth. I wish the lecturers to treat their subjects as a strictly natural science, the greatest of all possible sciences, indeed, in one sense, the only science,—that of Infinite Being, without reference to or reliance upon any supposed special exceptional or so-called miraculous revelation. The lecturers shall be under no restraint whatever in their treatment of their theme. The

lectures shall be public and popular, that is, open not only to students of the Universities, but to the whole community, without matriculation."

*The arrangements for the next course will be duly announced.*

### III.—DEPARTMENT OF SCIENCE.

#### MATHEMATICS.

PROFESSOR CHRYSAL.

*Junior Class*—Taught by the Assistant, under supervision of the Professor. 12 to 1.

Plane Geometry equivalent to Euclid, Books i., ii., iii., iv., and vi. (*Syllabus of Plane Geometry*, prepared by the Association for the Improvement of Geometrical Teaching forms the text of the lectures); Solid Geometry, equivalent to Euclid, Book xi.; Modern Geometry; and Elementary Algebra.

*Senior Class*—9 to 10.

This is the qualifying class for the Ordinary Degree of M.A. and for the First Science Examination.<sup>1</sup>

Algebra, including the elements of the Theory of Equations, and of Determinants, the Theory of Limits and the Elements of Curve Tracing; Plane and Spherical Trigonometry; Conic Sections, treated geometrically and analytically; Modern Geometry.

*Intermediate Honours Class*—Monday, Wednesday, Friday,  
11 to 12.

This course will suit Engineers and other Science Students who do not wish to make a specialty of Pure Mathematics.

Elementary parts of the Differential and Integral Calculus, and of the Calculus of Finite Differences. Analytical Geometry, Plane, and Elementary Solid. It is assumed that the Student has a knowledge of the Theory of Equations, and of the elements of the Theory of Determinants before he joins this Class.

<sup>1</sup> See footnote 2, page 60.

*Advanced Honours Class*—Monday, Wednesday, Friday,  
10 to 11.

The subjects of this are the higher parts of the Differential and Integral Calculus ; Differential Equations ; Definite Integrals with special reference to Fourier's Theorem ; Functions of Laplace and Bessel ; Higher Plane Curves ; Analytical Geometry of Three Dimensions.

Additional lectures on Projective Geometry, and other special subjects are given occasionally.

*Tutorial Classes.*—Occasional lectures are also given by the Class Assistant. The time is devoted to the repetition of parts of the class lectures and to the working of examples.

*Home Exercises* are prescribed weekly in all the classes.

*Written Examinations* are held during the Session. The class honours are determined solely by these examinations.

*Text-Books.*—As a rule *special* text-books are not prescribed ; but the student is recommended to select from the following :—

*Geometry.*—Wilson's Elementary Geometry, or the Text-Books of the Society for the Improvement of Geometrical Teaching, and one or more of the following, for the sake of the exercises they contain.—Mackay's, Todhunter's, Nixons', or Casey's edition of Euclid's Elements, and Casey's Sequel to Euclid.<sup>1</sup>

*Algebra.*—Chrystal, or Todhunter, Gross, Chambers's Mathematical Tables.

*Solid Geometry and Conic Sections.*—Taylor (smaller work) or Taylor<sup>1</sup> (larger work).

*Trigonometry.*—Pressland and Tweedie, or Lock (M'Lelland and Preston<sup>1</sup> for Spherical Trigonometry).

*Analytical Geometry.*—Smith's Analytical Conic Sections ; and Dyer's Exercises in Analytical Geometry. Students intending to take the Third Class are recommended to get Salmon's Conic Sections, Salmon's Higher Plane Curves,<sup>1</sup> and Salmon's

<sup>1</sup> Recommended to those only who make Mathematics a speciality.

Geometry of Three Dimensions,<sup>1</sup> or, instead of the last, Smith's Solid Geometry.

*Projective Geometry.*—Cremona's Elements of Projective Geometry translated by Leudesdorf, or Henrici's Article on Geometry, "Encyclopædia Britannica" (9th edition).

*Higher Algebra and Theory of Equations, etc.*—Burnside and Panton's, or Todhunter's Theory of Equations; Thomson's Introduction to Determinants, and Muir<sup>1</sup> or Scott<sup>1</sup>; and Salmon's Higher Algebra for those who mean to read for Mathematical Honours.

*Differential and Integral Calculus.*—Williamson's Treatises, Forsyth's Differential Equations,<sup>1</sup> Frost's Curve Tracing, Boole's Finite Differences.<sup>1</sup>

*Summer Session, 1902.*

CHARLES TWEEDIE, M.A., B.Sc., *Lecturer.*

1. *Senior Mathematics (First Graduation Half-Course)*—

11 to 12.

This Class qualifies for Graduation in Arts and Science as a First Half-Course<sup>2 3</sup> in Mathematics. The work consists of Algebra and Plane Trigonometry, corresponding to the First Half of the Winter Graduation Course.

2. *Senior Mathematics (Second Graduation Half-Course)*—

12 to 1.

This Class qualifies for Graduation as a Second Half-Course<sup>2 3</sup> if taken *after any* First Half-Course in Mathematics. Suitable also for Students reading for the more advanced part of the Winter Graduation Course. The work consists of Algebra and the elementary treatment of the Conic Sections, Geometrical and Analytical.

<sup>1</sup> See footnote, p. 90.

<sup>2</sup> See footnote 2, p. 60.

<sup>3</sup> The first half of the Winter Graduation Course up to Christmas qualifies as a First Half-Course in Mathematics, and the second half of the Winter Course from Christmas to the end of the Session as a Second Half-Course. *Any* First Half-Course, along with *any* Second Half-Course, taken subsequently, qualifies as a full Course of Instruction for Graduation.

In each Class weekly exercises are prescribed, and two written examinations are held.

3. *Honours Mathematics (Graduation Half-Course)*—10 to 11.

This Class qualifies as a First Half-Course for Graduation in Arts and Science, with Honours in Mathematics and Natural Philosophy, and will also, so far as is expedient, be adapted for Engineering Students.

The course will aim at a working acquaintance with the more elementary parts of Determinants and the Theory of Equations (not treated in the Winter Advanced Courses), Differential and Integral Calculus, Finite Differences, and Analytical Geometry.

*Tutorial Classes.*

The above Classes also serve for Tutorial Classes.

Weekly exercises are prescribed on the work of each class.

For text-books, see page 90.

## NATURAL PHILOSOPHY.

PROFESSOR                      AND DR KNOTT.

The following outlines of Lectures were revised by Professor Tait, but they may be modified by his successor :—

*Ordinary Class.*—(Qualifying for M.A. and First Science Examination.)<sup>1</sup>

The subjects embraced in this Course are :—

1. Properties of Matter—including Inertia, Gravitation, Molecular Forces, &c.
2. Abstract Dynamics—including Kinematics, Statics and Kinetics of Solid, Liquid, and Gaseous Bodies, with their applications.
3. Sound, and Wave-propagation in general.
4. Heat (including Thermo-Dynamics).
5. Light (Geometrical and Physical Optics, and Radiation generally).
6. Electricity.
7. Conservation of Energy.

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<sup>1</sup> See footnote 2, p. 60.

8. Astronomy (Descriptive and Physical).

9. Meteorology.

Properties of Matter, Abstract Dynamics, and Conservation of Energy, together with two or three others of the above divisions of the subject, are treated in detail every Session, the remainder being discussed in a more superficial manner, as it is impossible to enter at length into all in a single Session.

It is intended that in 1901-1902, besides Sections 1, 2, and 7, Sections 4 and 6 shall form the more detailed part of the Course.

The Class is examined at intervals upon the subjects treated in the Lectures ; and a prize is given for the best answering. In these examinations, which form an essential part of the class-work, no Mathematics are requisite, except the most elementary portions of Arithmetic, Algebra, and Geometry.

In January and March there are special Examinations on prescribed subjects, applying mainly to students competing for Class Prizes ; and, on these two occasions only, the Class is divided into two parts—the division depending mainly upon the students' proficiency in Mathematics. In the Lower Division, the elements of Algebra and Geometry alone are required ; in the Higher Division, Algebra, Geometry, and the Geometry of the Conic Sections are necessary. The Prizes in each Division are determined by adding the marks obtained in the two sets of Examinations above described. No student who has obtained a Prize in either Division can compete, in a subsequent Session, for a Prize in the same or in a lower Division.

The Text-Book for the Dynamical part of the Course will be the little work "Newton's Laws of Motion" (A. & C. Black, 1899). For the remainder of the subject the student may consult some of the following books :—Clerk-Maxwell's "Matter and Motion," Jenkin's "Electricity," Balfour Stewart's "Lessons in Physics," Knott's "Physics," Tait's "Properties of Matter," "Heat," and "Light."

The special Examinations in January 1902 will be on :—

*Higher Division.*—Newton's "Three Sections" (Goodwin's



"Course of Mathematics," Frost's "Newton," or any good edition of the *Principia*).

*Lower Division.*—Herschel's "Astronomy," the smaller work, in a recent edition, omitting the chapter on Perturbations. A series of explanatory lectures will be given by the Class-Assistant before this Examination.

The subjects for the March Examinations in both Divisions will be Kinematics and Dynamics. The range will depend upon the progress which the Class has made in these subjects.

*Intermediate Honours Class*—Monday, Wednesday, Friday,  
9 to 10.

This Course, given by the Lecturer on Applied Mathematics, will include the more elementary parts of Dynamics of Particles, Rigid Solids, and Flexible Strings; the Theory of the Potential; and Thermodynamics.

For syllabus of Advanced Science (Dynamics) Class, see Courses in Science.

*Advanced Honours Class*—Monday, Wednesday, Friday,  
12 to 1.

In this Course (given by the Professor), the subjects begun in the Intermediate Course will be further developed: and Thermodynamics, with one or more special branches of Applied Mathematics [such as the Kinetic Theory of Gases, the Lunar Theory, the Undulatory Theory, Vortex Motion, &c.] will be fully treated. It is most important to observe that no one can possibly profit by attendance at this class, unless he has fully mastered the subjects treated in the Intermediate Class.

One of the text-books in each of these Honours Courses is Tait's *Dynamics*, a reprint of "*Mechanics*," in the last edition of the "Encyc. Brit."

SUMMER CLASS OF PHYSICS, SPECIALLY FOR MEDICAL  
STUDENTS.

For particulars, see Courses in Faculty of Medicine.

## PHYSICAL LABORATORY.

This has been established with the view of affording students a practical knowledge of the construction and use of physical apparatus, and the mode of conducting experimental inquiries. The Laboratory is open five or six hours daily in the Winter and Summer Sessions, under superintendence of the Professor and his Class-Assistant. Fee, £6, 6s. for the Winter Session. It is hoped that, with the aid of the valuable collection in the Museum, results of real use to science may be obtained.

A practical class, for instruction in the elementary processes of measuring Time, Mass, Length, Angle, Force, &c., will be formed in Winter and also in Summer. Each Course will extend to about three months. Fee, £2, 2s.

## ELEMENTARY DYNAMICS.

C. G. KNOTT, D.Sc., *Lecturer.*

This Half-Course, to be given in the Summer Session 1901, is primarily intended to prepare students for the Intermediate Honours Class in Natural Philosophy and the Advanced Science Class in Dynamics (Engineering). To facilitate the work of these Winter Classes, all Honours and Science Candidates are strongly recommended to take this Course, in which only Mathematics of the standard of the Higher Preliminary will be used. The Course will include Kinematics and Kinetics of a Particle, Impact, Simple cases of Kinetics of a Solid, Equilibrium, Statics, Hydrostatics.

Although the work will reach a somewhat higher standard than is necessary for the Dynamical part of the M.A. Pass and 1st B.Sc. Examination in Natural Philosophy, the Class will be serviceable to Students preparing for this Examination. The Course will also be useful to men preparing for the Civil Service Examinations.

Text-Books recommended. —MacGregor's *Dynamics*; Pinkerton's *Hydrostatics and Pneumatics*; Minchin's *Statics* (Vol. I.).

*Summer Session, 1902.*

## ADVANCED EXPERIMENTAL PHYSICS.

W. PEDDIE, D.Sc., *Lecturer.*

In this Class certain subjects, which may be treated mathematically in the Winter Advanced Honours Course of Natural Philosophy, will be treated fully from the experimental point of view. The Course is also intended for undergraduates in Experimental Science. It is proposed to treat experimentally the advanced parts of Light, Electricity, Magnetism, &c. In connection with the Undulatory Theory, the following subjects will be discussed :—Reflection, refraction, and interference of ordinary and of polarised light ; conical refraction ; Dispersion, ordinary and anomalous ; diffraction ; electro- and magneto-optics. In Electricity and Magnetism such subjects as the discharge of electricity through gases ; the screening effect of conducting sheets, and other phenomena associated with rapidly alternating electromotive forces ; electromagnetic undulations ; magnetic hysteresis, &c., will be treated. The experimental investigation of reciprocally related physical phenomena will be specially illustrated from various branches of physics ; and, on the dynamical side, special attention will be devoted to the realisation of dynamical systems illustrative of physical phenomena.

*Tutorial Class.*NATURAL PHILOSOPHY (*Advanced Honours*).

The work will correspond as closely as possible to that of the Winter Advanced Honours Course. The Class is intended for Students preparing for the above Winter Course, or for the Advanced Honours Examination.

## ASTRONOMY.

PROFESSOR COPELAND.

(*Eighty Lectures, and, on different days, Twenty Meetings of two hours each for Observatory work.*)

Lectures on Practical Astronomy will be delivered on Mondays,

Tuesdays, Wednesdays, and Thursdays. Instruction in the use of portable and fixed astronomical instruments will be given at the Royal Observatory on Blackford Hill, on Fridays, beginning at 8 P.M. Attendance at the evening demonstrations is obligatory on all who take Astronomy as a qualifying course for graduation. The Lectures will be divided into two sections, the first of which will embrace the theory and use of Astronomical Instruments, together with as much General Astronomy as is requisite to guide the student in making observations in the field as well as in an observatory. The Second Division will treat of the utilization of observations of Comets, etc., in the computation of orbits and ephemerides.

### CHEMISTRY.

PROFESSOR CRUM BROWN.

This Course, the same as for Students of Medicine and Science, embraces One Hundred Lectures and Fifty Meetings for Practical Work in the Practical Chemistry Class-Room.

### ZOOLOGY.

PROFESSOR EWART.

This Course, the same as for Students of Medicine and Science, embraces Fifty Lectures and Fifty hours for Practical Work.

### BOTANY.

PROFESSOR BAYLEY BALFOUR.

This Course is the same as for Students of Medicine and Science with additional laboratory work. Attendance must be given on seventy-five separate days.

### GEOLOGY, INCLUDING MINERALOGY.

PROFESSOR GEIKIE.

This Course, the same as for Students of Science, embraces Seventy Lectures, Twenty Hours for Practical Work, and Ten Field Demonstrations.

#### IV.—DEPARTMENT OF HISTORY AND LAW. HISTORY.

PROFESSOR LODGE.

The Course qualifies for Graduation in Arts. The subject, until further notice, is GENERAL BRITISH HISTORY, divided into the following Periods and Subjects :—

*Part I.*—1. The Original Peoples of Britain and the Roman Occupation.—2. The Growth of the English Nation.—3. The Growth of the Scottish Nation.—4. The Institutions of England before the Norman Conquest.—5. Norman and Angevin Rule.—6. Simon de Montfort and Edward I.—7. The Hundred Years' War.—8. Constitutional Development during the War.—9. The Social Importance of the Fourteenth Century.—10. The Scottish Monarchy, Nobles, and Parliament.—11. Personal Monarchy in England.—12. Social Changes in England under the Tudors.—13. The Reformation in England.—14. The Reformation in Scotland.

*Part II.*—15. Crown and Parliament (1603-1640).—16. The Long Parliament and the Protectorate (1640-1660).—17. Restoration and Revolution (1660-1689).—18. Colonies and Commerce (1600-1689).—19. Whigs and Tories : William III and Marlborough (1689-1714).—20. Scotland and Ireland : the Union (1689-1714).—21. The Whig Supremacy (1714-1760).—22. India and America (1714-1763).—23. George III and the Parliament (1760-1783).—24. The American War (1763-1783).—25. Pitt and the French Revolution (1783-1815).—26. Ireland : the Union (1715-1800).—27. India (1763-1815).—28. Reaction and Reform (1815-1832).

WORK OF THE CLASS.—1. Lecture daily, except Saturdays, at eleven.

2. Three Class Examinations will be held, and three or more Essays set, during the Session. Honours will be awarded to candidates distinguished both in the examinations and in the essays.

3. The History Library (adjoining Professor Kirkpatrick's

Class-Room) may be consulted by members of the History Classes during specified hours.

*Books recommended.*—For elementary purposes, S. R. Gardiner's "Student's History of England," or Ransome's "Advanced History of England." J. R. Green's "Short History of the English People," J. F. Bright's "History of England," with Hume Brown's "History of Scotland," and Morris' "History of Ireland" (Cambridge Series). For wider study, see the Syllabus given to the Class and the lists given in the "Introduction to English History" by Gardiner and Mullinger, part ii.

*Honours Classes.*

PROFESSOR LODGE.

The subject for the Session 1901-1902 is

THE HISTORY OF FRANCE FROM 1715-1815.

The following books are prescribed:—Arthur Young, "Travels in France"; Bailly, "Mémoires," tome I.; Bertrand-Moleville—"Mémoires Particuliers"; Schmidt, "Tableaux de la Révolution Française," tome I.; Morse Stephens, "Orators of the French Revolution."

*Books recommended for the use of the Class.*—Martin, "Histoire de France," tomes XV. and XVI.; Aubertin, "L'Esprit public au dixhuitième Siècle"; Rocquain, "L'Esprit Révolutionnaire avant la Révolution"; De Tocqueville, "France before the Revolution"; Morse Stephens, "History of the French Revolution"; Mignet, "History of the French Revolution"; Perkins, "France under Louis XV."; Lanfrey, "Life of Napoleon."

This Course of Fifty Lectures qualifies for graduation in Arts with Honours in History. The Lectures will be given on Mondays, Wednesdays, and Fridays at 10.

Two class examinations will be held, and several essays set, during the session. Students in this class may attend Mr Heatley's "Mackay Lectures," without fee, and may use the History Reading-Room.

The Honours Subject for the session 1902-1903 will be—  
The History of Europe from 1715 to 1815.



## BRITISH HISTORY (from Wycliffe to Luther).

*Honours Course—Fifty Lectures.*

PROFESSOR KIRKPATRICK.

I. Introductory — Conflicts between State and Church — Precursors of Wycliffe. II. Outline of Wycliffe's career—his doctrines — Lollardy — Survival of Wycliffe's influence. III. The Great Schism—the Empire and the Papacy—Huss, Jerome, of Prague, and Peter Payne — Luther. IV. Illustrations of Wycliffe's doctrines from his works and other original sources.

*Books recommended.*—Wycliffe's Works—"Select English Works," ed. by Thomas Arnold, 3 vols. 1869-71; "English Works of Wyclif hitherto unprinted," ed. by F. D. Matthew, 1880; Johann von Wiclif und die Vorgeschichte der Reformation" (by Dr G. V. Lechler, 2 vols., Leipzig, 1873) or translation by Lorimer); "Fasciculi Zizaniorum," ed. by W. W. Shirley (Rolls Series, 1858); "Political Songs," ed. by Wright (Rolls Series); "Chronicon Angliae," ed. by E. M. Thomson, 1874; "Piers the Plowman," and Chaucer's "Prologue"; Walsingham's "Historia Anglicana," ed. by Riley (Rolls Series); Loserth's "Wiclif und Hus" (or translation); James Baker's "Peter Payne, a great forgotten Englishman"; Palacky's "Documenta Magistri Jo. Hus vitam illustrantia" (1403-18); Wycliffe's "Wicket"; "Trialogus" (ed. by Lechler; Clar. Press); Wycliffe's "De officio regis"; Creighton's "Papacy during the Reformation," vols. I. and II.); Seebohm's "Oxford Reformers."

These Lectures, qualifying as a full course for graduation in Arts with Honours in History, or with Honours in English, or as a half-course for graduation in Law, will be given on Mondays, Tuesdays, and Thursdays, at 4 P.M., beginning on Tuesday, 15th October 1901. (After Christmas, on Tuesdays and Thursdays only). Students attending them may use the History Library, superintended by Mr Heatley, Mackay Lecturer and Assistant in History. Mr Heatley may be consulted during six hours weekly (Winter Session) as to reading—the

hours to be intimated in October. They may attend Mr Heatley's Mackay Lectures without additional fee.

*Mackay Lecturer*—D. P. HEATLEY.

POLITICAL THOUGHT AND ACTION IN BRITAIN  
SINCE THE REFORMATION.

A Course of Twenty Lectures, being the "Mackay Lectures in History," to be given in the Moral Philosophy Class-Room on Mondays and Thursdays at 12, beginning on Monday, 18th November.

The Course will be mainly on the following subjects, and, for 1901-1902, more especially on sections 5-9 :—1. The Trend of English Politics. 2. Church and State (*e.g.* Hooker; and the historical problem). 3. The Politics of the Stuart Kingship; Puritan Politics (several types); the *via media* and the Politics of Francis Bacon (his relation to Machiavelli). 4. Transition to the Revolution: Hobbes, Locke, and the facts. 5. Revolutions: the character of the English Revolution; the influence of 1688. 6. The Party Idea in British History (with references to State Tracts and Political Pamphlets and Writings of the 17th and 18th centuries). 7. The English Constitution and the conduct of Foreign Policy, contemporary criticism, foreign and British, during the 18th and 19th centuries. 8. The Sphere of the State in Britain since 1688. 9. The "Imperial Idea" and its perversions during three centuries.

References will be made throughout to contemporary political thought, in both published works and MSS.

The Course may be attended without fee by members of the History Classes. For others the fee is one guinea, together with entrance fee of five shillings for non-matriculated students.

*Lecturer*—D. P. HEATLEY.

EUROPEAN HISTORY: 1715-1848.

A Course of Fifty Lectures on Mondays, Wednesdays, and Fridays at 11, beginning on Wednesday, 23rd October. For preliminary reading apply to the Lecturer.

*Summer Session, 1902.*

BRITISH HISTORY (General and Constitutional) : 1066-1832.

A Course of Fifty Lectures on the Political Development of Britain. First Lecture, Thursday, May 1, 1902, at 9 A.M. For preliminary reading apply to Mr Heatley.

## POLITICAL SCIENCE.

(Tuesdays and Thursdays, at 10.)

This Course of Twenty Lectures will treat mainly of the following subjects :—

I. GENERAL.—Political Theory as (*a*) absolute, (*b*) relative. Conditions of Political Development. The Sphere of Government, politically and historically considered. Comparison of the Ancient, the Mediæval and the Modern State.

II. HISTORY of Political Theory, with some reference to the historical conditions of each age.

III. MODERN POLITICS. — Political Morality. Liberty and Authority. Sovereignty. Organisation of the State. Types of the Modern State. Mediate Democracy : Representation ; Legislature and Executive ; Checks on Democracy.

For preliminary reading apply to Mr Heatley. Supplementary reading will be indicated during the Course.

## FINE ART.

PROFESSOR BALDWIN BROWN.

This Course of one hundred Lectures, qualifying for the M.A. degree, is designed—

1. To bring before students, by critical descriptions and illustrations, the chief ancient and modern works of Architecture, Sculpture, Painting, and the Decorative or Industrial Arts.

2. To show how these works are connected in origin and use with the national and social life of successive epochs ; and, conversely, how Artistic Monuments illustrate Classical and Biblical literature, and bear on historical investigation in general.

3. To explain as far as practicable the technicalities of the various Arts, and to open up those aspects of Art which present

themselves naturally to the artist, but are sometimes overlooked by the literary student.

On the historical side—

The characteristics of different styles and schools of Art will be broadly indicated, but this part of the subject, which can be studied from books, will not be dwelt upon at length.

On the artistic side—

Particular stress is laid on the explanation of different materials and technical processes, as upon these largely depend the particular forms in which beauty is realised in the various works of human hands.

Arrangements for the work of the Class :—There are Lectures daily at 3 P.M. Three Class examinations are held, and a series of eight Essays are set for the Cousin Prize (£15). The Essays, to the number of at least five, are included in the work required from those taking the Course for Graduation.

The Class Library, Reading Room, and collections of examples are open to members of the Class.

Museums, &c., are visited from time to time on Saturdays.

The Professor's manual, "The Fine Arts," is used, so far as it goes, as a text-book. Other books to be read by those taking the Course for Graduation are indicated on page 138.

### *Honours Courses.*

#### CLASSICAL ARCHÆOLOGY AND HISTORY OF ANCIENT ART.

This Course qualifies as an alternative subject for Honours in History. For details see page 71.

#### BRITISH HISTORY AS ILLUSTRATED IN MONUMENTS.

An Honours Course of Fifty Lectures will be given in the Winter Session, 1901-2, on British History as illustrated by monuments and topography, embracing a notice of civil and ecclesiastical works of various kinds connected with the life

of Great Britain in different epochs of the middle ages. Roman towns, villas, military works and roads, with their fate in Saxon times, will be used to illustrate the condition of the Britannic Provinces and the changes wrought by the Teutonic conquest, and village and borough morphology will be examined in their bearing on the constitution of society in mediæval Britain. The introduction of Christianity into different parts of these islands, with the institutions to which it gave rise, will be treated in connection with crosses, churches, the evidence of dedications, and the like. Other subjects dealt with will include the pre-Benedictine monastery as it survived in Celtic lands; the later houses of Benedictines, canons and friars; cathedral, collegiate, rural and private churches and chapels; the different forms of the chieftain's dwelling, including the burh and the later stone castles in their Norman, Edwardian, and Scottish forms; and the institutions of the mediæval borough. This Course will qualify as an alternative subject for Honours in History, but it will also be suited for general hearers who take an interest in archæological study. (For subjects, &c., see page 148.)

## CONSTITUTIONAL LAW AND HISTORY.

PROFESSOR KIRKPATRICK.

This Course is divided into two half-courses: (1) Constitutional History of England; United States of America, France, Germany, Switzerland, etc. (see under Faculty of Law).

## ECCLESIASTICAL HISTORY.

PROFESSOR TAYLOR.

(See under Faculty of Divinity.)

## ROMAN LAW.

PROFESSOR MACKINTOSH.

A full Course qualifying for Graduation in Arts is given during the Winter Session. It is divided into two distinct parts.

I. HISTORY.—This Course, extending up to the Christmas vacation, includes a sketch of the Constitutional and Legal History of Early Rome ; a survey of the primitive law in its various branches ; and a discussion of the Sources of the law, the rise and progress of Jurisprudence, Codification, and other topics belonging to the external history of the civil law down to the reign of Justinian. It is intended to serve as a historical introduction to the study of the special departments. The historical lectures qualify as a Half-Course for Graduation in Arts.

II. INSTITUTES.—The second half of the Course will be devoted to a systematic exposition, in detail, of the law relating to persons and the family, and to property and real rights. In general the order of Justinian's Institutes is followed.

The Lectures on Succession and Contracts are given in the Summer Session. See under Faculty of Law.

Fee for the Half-Course, £2, 2s. ; for the full Arts Course, £4, 4s.

*Text-Books.*—The Institutes of Gaius and of Justinian.

In connection with the historical lectures, students are referred to Muirhead's "Historical Introduction to the Private Law of Rome," and Maine's "Ancient Law."

## PUBLIC INTERNATIONAL LAW.

PROFESSOR SIR LUDOVIC GRANT, BART.

This Course of Forty-five class meetings commences on 7th January 1902, at 2. *Vide under Faculty of Law.*



ADVICE TO STUDENTS REGARDING CURRICULA  
IN ARTS.

1. Every intending Arts Student is advised to make himself familiar with the Regulations for Graduation in Arts before commencing his course. In particular he should make sure, in the first place, that he has complied with all the Conditions of the Preliminary Examination. He should then choose a Curriculum to suit his requirements; see that it satisfies the regulations; that he has all the qualifications necessary for entering certain Classes; and that his studies are spread over the required number of Sessions. In any case of doubt he should consult the Dean of the Faculty.

2. While Students are fully at liberty to arrange their Curricula as they deem best for their particular requirements, the Faculty of Arts strongly recommend Candidates for the *Ordinary Degree* to devote their First Session to Languages and Mathematics, and to Junior Classes when such are necessary.

The Third Session should be devoted to those subjects which presuppose a previous training in others, such as English Literature, Political Economy, Education, the advanced subjects in History, and the Law subjects.

3. Candidates for Honours Degrees are advised so to arrange their classes that they may be able to devote the whole of the year immediately preceding the Honours Examination to the special work of their Honours Group.

4. Honours Students and Students studying for special examinations, should, as early in their Course as possible, consult the Professors of the Special Subjects which they are to study. Professor Hardie is Convener of a Committee specially charged with the Supervision of those studying for the Indian and Home Civil Service Examinations.

The attention of the students referred to under this head is directed to the Summer Classes, which afford them obvious facilities for arranging their studies so as to economise time, *e.g.*, they may take Summer half-Courses in some of the subjects in which they have to pass on the standard of the Ordinary Degree.

5. For special and detailed advice as to each subject, students should consult the several Professors or Lecturers *before entering upon their Curricula*. In particular, those who intend proceeding afterwards to Degrees in Divinity, Law, Medicine, Science, or Music, should in cases of doubt, consult the Deans of these Faculties as to the most appropriate Arts Curriculum.

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# Graduation in Arts.<sup>1</sup>

*Candidates who commenced attendance on qualifying Classes before 1st October 1892 are referred to the CALENDAR for 1895-96, or previous CALENDARS.*

*The Degree admits to professional Study, to the Army, &c. It also qualifies for Masterships of Public Schools, subject to an examination in the methods of instruction, and six months' attendance in a Public School for the practice of teaching. Those who take the Schoolmaster's Diploma are, however, exempted from this Examination if Graduates of this University.*

## ACADEMICAL YEAR.

I. The Academic year commences on the first day of October. The winter session opens about the middle of October, and includes not less than twenty teaching weeks. The summer session opens about the beginning of May, and includes not less than ten teaching weeks.

II. The Curriculum for the degree of Master of Arts (M.A.) extends over not less than three winter sessions, or two winter sessions and three summer sessions.

## PRELIMINARY EXAMINATION.<sup>2</sup>

III. (1) Before entering on the Curriculum (subject to the *proviso* contained in Section IV., Sub-section 1) each student must pass a Preliminary Examination in the following subjects:—

1. English.
2. Latin or Greek.
3. Mathematics.
4. One of the following:—Latin or Greek (if not already taken), French, German, Italian, or such other language as the Senatus Academicus may approve,<sup>3</sup> Dynamics.

(2) The examination must be passed in the matters and on the standards hereinafter defined; but there is a higher and a lower standard in Latin, Greek, and Mathematics.

Candidates must pass on the higher standard in at least one of these three subjects, and may pass on the lower standard in either or both of the remaining two; subject always to the conditions relative to attendance contained in Section IV. hereof.

(3) English includes Grammar and Composition, and the outlines of Geography and British History, and the standard must not be lower than that presently adopted for the Higher Grade Leaving Certificate of the Scotch Education Department.

(4) Latin and Greek comprise grammatical questions, translation

<sup>1</sup> The annual amount of Matriculation, Class Fees, &c., of the regular course in Arts may be estimated at about £10, 10s. See Advice to Students regarding Curricula, page 106.

<sup>2</sup> See also additional Regulations of the Joint Board of Examiners, pages 448-452 inclusively.

<sup>3</sup> Any Candidate who proposes to be examined in a language other than those above named, is required to apply to the Senatus for approval before 1st February or 1st July for the Spring and Autumn Examinations respectively.

into English from Latin or Greek authors not previously prescribed, and translation of plain passages or easy sentences from English into Latin or Greek. The higher standard must not be lower than that formerly adopted in the examination for a Curriculum of three sessions, or for the Higher Grade Leaving Certificate of the Scotch Education Department, and the lower standard must not be lower than that presently adopted for the Lower Grade Leaving Certificate of the said Department.

(5) French, German, and Italian comprise grammatical, literary, and easy philological questions, translation into English from French, German, or Italian authors not previously prescribed, and translation from English into French, German, or Italian; and the standard must not be lower than that presently adopted for the Higher Grade Leaving Certificate of the Scotch Education Department.

(6) Mathematics on the lower standard comprises—(1) Arithmetic, including Vulgar and Decimal Fractions, Proportion, Percentage, Square Root, Simple Interest; (2) Algebra, including Fractions, Factors, Square Root, Equations of the First Degree, Simultaneous Equations of the First Degree, Easy Quadratic Equations, Problems leading to the above Equations; (3) Geometry—Euclid, Books I., II., and III. (or their equivalents), with easy deductions. Demonstrations other than Euclid's will be accepted if they assume no propositions which in Euclid's order are subsequent to the proposition under consideration.

(7) Mathematics on the higher standard, in addition, comprises Euclid, Books IV., VI., and the first twenty-one propositions of Book XI. (or their equivalents), with deductions, Quadratic Equations, Trigonometry to the solution of Triangles inclusive, and the use of Logarithmic Tables.

(8) Dynamics means the Elementary Statics and Kinetics of Solids, Liquids, and Gases.

(9) A candidate must pass in all the required subjects at one or not more than two examinations, but may offer himself for re-examination as often as may be necessary to satisfy this condition.

IV. (1) Attendance on any class does not qualify for graduation, unless the whole Preliminary Examination has been passed. But any Student who has passed in Latin, Greek, or Mathematics on the higher standard may attend a qualifying class in such subject or subjects without having passed in the other subjects of the examination, provided always that (a) no candidate will be allowed to present himself for examination in any subject qualifying for graduation until he has passed the whole Preliminary Examination, and (b) no Student will be admitted to a degree in Arts unless he has attended qualifying classes in the University granting the degree, or in another Scottish University, as provided by Section XXV. hereof, for three Academic years after he has completed his Preliminary Examination.

(2) Attendance on a class in any language included in the Prelimin-

any Examination does not qualify for graduation, unless the candidate, before entering the class, has passed the Preliminary Examination in that subject, and on the higher standard where a double standard is provided. He may, for that purpose, attend any Preliminary Examination held during the course of his study, taking only the paper set in that subject; provided always that the provisions of the subsection immediately preceding have been satisfied.<sup>1</sup>

(3) Attendance on a class in any language not included in the Preliminary Examination will not qualify for graduation, unless the candidate has previously passed an examination in that language on a standard as nearly as possible equivalent to the higher standard of the languages included in the Preliminary Examination.<sup>2</sup>

(4) Attendance on a class of Mathematics or Natural Philosophy will not qualify for graduation unless the candidate, before entering the class—in addition to the examination in Mathematics on the Lower Standard required of all students—has passed an examination in the following subjects [Intermediate Mathematics]<sup>1</sup> :—

- (a) Euclid : Book VI., Propositions 1-19, or Geometry equivalent thereto.
- (b) Algebra : Quadratic Equations, Ratio and Proportion.
- (c) The Trigonometry of Right-angled Triangles.

(5) A student, who, having passed the Arts Preliminary Examination in accordance with these Regulations, has thereafter obtained a certificate of attendance on a qualifying class of Mathematics, will not be required to pass any further examination in Mathematics as a condition of entering on the course of study for graduation in Science.

V. (1) The Preliminary Examination is held at each University twice in each year, and is conducted in writing.

(2) The Joint Board of Examiners has power to accept the Higher Grade Leaving Certificate of the Scotch Education Department in any subject as an equivalent for the Preliminary Examination in that subject; and to accept the Lower Grade Leaving Certificate of the said Department as an equivalent for the Preliminary Examination on the lower standard in Latin, Greek, and Mathematics; provided they are satisfied that the standard of the examination, at which the said certificates were granted, is not lower than that required by these Regulations.

(3) The Joint Board has power to determine what examinations, if any, other than those for the Leaving Certificates of the Scotch

<sup>1</sup> Candidates are required to enter for examination at the usual periods and to pay the fee of 10s. 6d.

<sup>2</sup> Candidates who require to pass an examination for entering on the courses of Sanskrit, Hebrew, Arabic, Syriac, or Celtic, are required to enter their names and pay the fee of 10s. 6d. at the usual periods for entering for the Preliminary Examination.

Education Department may be accepted as equivalent to the Preliminary Examination in whole or in part, provided they are satisfied that such other Examinations are in fact equivalent thereto.

#### ORDINARY DEGREE.<sup>1</sup>

VI. Candidates for the ordinary degree of Master of Arts may follow the Curriculum and take their degree in the subjects recognised for graduation under the Universities (Scotland) Act, 1858, subject always to the preceding provisions of these Regulations; or they may vary the Curriculum for graduation under the regulations contained in the immediately succeeding sections.

VII. (1) Candidates must attend full courses in at least seven subjects, and are examined on these subjects.

(2) Of these subjects four must be (*a*) Latin or Greek (not modern Greek); (*b*) English or a Modern Language (French, German, Italian, or Spanish), or History; (*c*) Logic and Metaphysics, or Moral Philosophy; (*d*) Mathematics or Natural Philosophy.

(3) The remaining subjects may be selected by the candidate from the Departments specified in Section IX. of these Regulations, under the following condition:—That the whole subjects taken must include either (*a*) both Latin and Greek (not modern Greek), or (*b*) both Logic and Moral Philosophy, or (*c*) any two of the following three subjects,—Mathematics, Natural Philosophy, and Chemistry.

VIII. (1) Each of the subjects must be studied in a full course of not less than one hundred meetings of the class on separate days, except in cases where the Senatus, with the approval of the University Court, have sanctioned, as qualifying for graduation, half courses of not less than fifty meetings on separate days; or where the Senatus, with the approval of the said Court, may, having regard to the nature of the subject, sanction full courses of less than one hundred or half courses of less than fifty meetings respectively.

(2) Two half-courses are held to be equivalent to a full course in such cases as the Senatus, with the approval of the University Court, may determine, and under such regulations as may from time to time be made for that purpose.

(3) Where a subject is taught in a practical class, as well as in a systematic class, the Senatus, with the approval of the University Court, regulates the course of study and determines the relative proportion of lectures and laboratory or practical work.

IX. The Departments of Study for graduation in Arts in each University, if adequate instruction is provided, include the following subjects, with such additions or modifications in any University as may hereafter be made by Ordinance of the University Court:<sup>1</sup>—

<sup>1</sup> See advice to Students regarding Curricula, p. 106.



1. *Language and Literature.*

Latin.	Italian.
Greek.	Spanish.
Modern Greek.	Sanskrit.
English.	Hebrew.
French.	Arabic or Syriac.
German.	Celtic.

2. *Mental Philosophy.*

Logic and Metaphysics.	Education (Theory, History, and Art of).
Moral Philosophy.	Philosophy of Law.
Political Economy.	

3. *Science.*

Mathematics.	Zoology.
Natural Philosophy.	Botany.
Astronomy.	Geology.
Chemistry.	

4. *History and Law.*

History.	Constitutional Law and History.
Archæology and Art (History of).	Roman Law.
	Public Law.

X. Candidates who produce certificates that they have satisfied all the conditions prescribed by these Regulations, and who have passed the necessary examinations, are entitled to receive the ordinary degree of M.A. on payment of the fees required.

DEGREE WITH HONOURS.<sup>1 2</sup>

XI. (I) The degree of M.A. may be taken with Honours in any of the following Groups, in which Honours Classes have been established in at least two subjects :—

- (a) Classics (*i.e.* Latin and Greek, with optional subjects such as Comparative Philology, Ancient Philosophy, and Classical Archæology).
- (b) Mental Philosophy.
- (c) Mathematics and Natural Philosophy.
- (d) Semitic Languages.
- (e) Indian Languages.

<sup>1</sup> *Civil Service Commission Examinations.*—Candidates for Graduation in Arts with Honours are reminded that most of their subjects are admissible also in the Public Examinations held by the Civil Service Commission and other Public Examinations, on the results of which many important posts in India and at home are awarded each year. A Committee of the Senatus has been formed for the purpose of directing the studies of Students who have these examinations in view. Those who desire advice or information on this subject should apply to Professor Hardie, Convener of the above-mentioned Committee.

<sup>2</sup> See advice to Students, p. 106.



- (f) English (Language, Literature, and British History).  
English Literature is the chief subject of this group, the linguistic and historical subjects being regarded as subsidiary.
- (g) Modern Languages and Literature.
- (h) History.
- (i) Economic Science (*i.e.* Political Economy, with either (a) Moral Philosophy or (b) History as Supplementary Honours subjects).

(2) Every candidate must take up at least five subjects. Two of these subjects, under separate Professors or Lecturers, must be selected from the candidate's Honours Group; and the five subjects must include one from each of the Departments of Language and Literature, Mental Philosophy, and Science, set forth in Section IX. of these Regulations.

(3) Every candidate must attend seven Classes, taking two Classes (one of which must be an Honours Class) in each of his Honours subjects.

(4) A candidate who has obtained Honours in any one Group may, before graduating, present himself again for examination in a second Honours Group. In such a case, he will not be required to attend more than two additional Classes, which must be Honours Classes, in the second Group.

Notwithstanding the foregoing provisions of this sub-section and of Section XIV. sub-section (1) hereof, a candidate who has already graduated may present himself for examination in any Honours Group within five years from the date of his first matriculation after having passed the Preliminary Examination. If he be successful in obtaining Honours, he shall receive a special certificate stating the Honours Group in which he has presented himself, and the class he has obtained in the Group.

(5) The examination in the subjects comprised in the candidate's Honours Group must be of a higher standard than that required for the ordinary degree of M.A. In his other subjects the standard will be that required for the ordinary degree.

(6) The Senatus, subject to the provisions of Sections XVI. to XX. of these Regulations, from time to time determines what subjects are comprised in each Group, what subjects may be taken in half-courses, and in which Group they may be taken: Provided that no new Group shall be instituted except by Ordinance of the University Court.

(7) The provisions of Section VIII. of these Regulations applies to Candidates for Honours; but, in their case, not fewer than fifty meetings, on separate days, extending over an entire winter session, will constitute a full course for an Honours Class; and not fewer than twenty-five meetings on separate days, extending over half a winter session, or an entire summer session, will constitute a half course.

XII. (1) Every candidate must include Latin, or Greek, either in his Honours Group or as one of the subjects in which the standard of examination is that required for the ordinary degree of M.A.

(2) Greek is compulsory for candidates for Honours in Mental Philosophy. But candidates for Honours in Mental Philosophy who have included Latin, but not Greek, as one of the subjects in which the standard of examination is the same as that required for the ordinary degree of Master of Arts, will be deemed to have satisfied the provisions of this subsection, if, before they offer themselves for the Honours Examination in Mental Philosophy, they have passed a special examination in translating into English passages from the works of Greek philosophical authors, including passages from the works of such authors not previously prescribed.

(3) Candidates for Honours in English, or Modern Languages and Literature, or History, or Economic Science (Groups *f*, *g*, *h*, *i* of Section XI. hereof) must include within the whole subjects taken for their degree (*a*) Logic and Metaphysics or Moral Philosophy, and (*b*) Mathematics or Natural Philosophy.

(4) Every candidate must obtain a certificate of attendance on the class of Latin or Greek, under sub-sections (1) or (2) of this section, before he offers himself for examination in his Honours group of subjects.

(5) Candidates for Honours in Economic Science (Group *i* of Section XI. hereof), who take Moral Philosophy as their supplementary Honours subject, may take a half course in the History of Civil Law and a half course in the Philosophy of Law, which, together, shall be deemed to constitute one of the subjects in which the standard of examination is that required for the ordinary degree of Master of Arts.

XIII. (1) The whole examination in the candidate's Honours Group must be taken at one time, and the whole examination necessary for graduation with Honours must be taken within five years from the date of the candidate's first matriculation after having passed the Preliminary Examination, unless that period shall be extended by the Senatus on special cause shown; and in every such case the Senatus must make a report to the University Court setting forth the reasons for the extension.

(2) Candidates for Honours may be examined, at any time during their Curriculum, in the three subjects in which the standard of examination is that required for the ordinary degree of M.A.

XIV. (1) A candidate who has passed the examinations necessary for the ordinary degree of M.A., but who has not yet graduated, may present himself for Honours within five years from the date of his first matriculation after having passed the Preliminary Examination, and will not be required to attend further classes:—subject always to the provisions of Section XII. hereof.

(2) No one is allowed to present himself a second time as a candidate for the degree of M.A. with Honours, who, upon examination, has failed to obtain Honours.

(3) A candidate is held to have presented himself who has notified his name for examination in accordance with the University regula-

tions. But it will be in the power of the Senatus to relax this rule on special cause shown; and in every such case the Senatus must make a report to the University Court setting forth the reasons for the relaxation.

XV. (1) In each Group there are three Grades of Honours, to be denominated respectively the First, Second, and Third Class. The names of the candidates entitled to Honours in each class are arranged in alphabetical order.

(2) For the degree of M.A. with Honours a Diploma is given setting forth the subjects in which he has taken Honours.

#### BOARDS OF STUDIES.

XVI. The Senatus of each University from time to time institutes Boards of Studies corresponding as nearly as may be to the Departments of Study enumerated in Section IX. of these Regulations.

XVII. Each Board of Studies consists of such Members of the Senatus and Lecturers in the University as the Senatus may from time to time select, and the Senatus appoints one of the Members of the Board to be Convener thereof.

XVIII. Before the end of each winter session each Professor and Lecturer in the said Departments of study must submit to the proper Board of Studies for its approval a syllabus of the subjects and books proposed for the work of his class for the next Academical year; and also a syllabus of the subjects and books to be prescribed for the Examinations for the Ordinary Degree of M.A. in the next Academical year, and for the Honours Examinations in the Academical year next but one. As soon as such approval has been given, these syllabuses must be transmitted to the Faculty of Arts for its consideration. The syllabuses, with such observations as the Faculty of Arts may see fit to make thereon, must then be transmitted to the Senatus for its sanction.

XIX. (1) Before the end of each winter session each Board of Studies must prepare a scheme, defining, for the Academical year next but one following, the classes which are deemed to be Honours Classes, and the subjects and courses of reading for Honours in its Department, and must report the same to the Faculty of Arts for its consideration. The scheme, with such observations as the Faculty of Arts may see fit to make thereon, is then transmitted to the Senatus for its sanction.

(2) Each Board must in like manner make recommendations through the Faculty of Arts to the Senatus in regard to the half-courses which may be sanctioned under these Regulations, and the lectures which may be given on special subjects.

XX. The Principal and the Dean of the Faculty of Arts are *ex officio* Members of each Board of Studies. The Convener presides, and, in his absence, each meeting appoints its own Chairman, and every Chairman has a deliberative, and, in cases of equality, a casting vote.

GENERAL.

XXI. In the case of a foreign student, whose native language is other than English, the standard required in English in the Preliminary Examination is such as the Joint Board of Examiners deems sufficient. In the case of a student, whose native language is other than European, the Senatus may accept as an alternative to Latin or Greek any other classical language, such as Sanskrit or Arabic, subject always to the provisions of Section IV., Sub-section 3 hereof.

XXII. If a student, before passing the Preliminary Examination, has attended a class qualifying for graduation, the Senatus may, on special cause shown, permit him to count such class as qualifying for graduation, on condition of his passing the full Preliminary Examination within such time thereafter as the Senatus may appoint; and in every such case the Senatus must make a report to the University Court setting forth the reasons for the relaxation.

XXIII. The examination in all the languages in the Curriculum must, as far as possible, be on the same standard in examinations for the same degree, and will in all cases test the candidate's knowledge of the history and literature of the several countries.

XXIV. A candidate for the degree of M.A. is not deemed to have attended a class as part of the Curriculum for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

XXV. A student, who has given attendance at classes recognised as qualifying for graduation during one or more sessions in any one or more of the Scottish Universities, may complete his Curriculum by giving attendance during the remainder of his course in another Scottish University, and may proceed to a degree in the latter University in the same way, in all respects as if the previous part of his Curriculum had been taken therein: Provided always that every such student must produce, to the satisfaction of the Senatus of the latter University, certificates of his having passed the Preliminary Examination, and of his attendance at the former University or Universities, and must be examined in all the subjects necessary for the degree of M.A. by the Examiners of the University in which he completes his Curriculum, and in which alone he will be allowed to graduate; and that no such student will be admitted to a degree in any University unless he has given attendance in such University during the last winter session of his Curriculum, and one other winter session or two summer sessions.

XXVI. A candidate for the degree of M.A. with Honours, who has failed to be placed in any class, may, provided that in the opinion of the Examiners he has given evidence of sufficient attainments in any subject for the ordinary degree of M.A., receive from them a certificate of having passed in such subject, which will count *pro tanto* as part of the examination required under the regulations for the ordinary degree of M.A.

XXVII. The degree of M.A. is in no case conferred on persons who have not satisfied the conditions hereinbefore set forth, and is not conferred *honoris causa tantum*.

XXVIII. A student who, at the time these Regulations came into operation, had commenced his course of study with a view to graduation in Arts in any of the Scottish Universities under the regulations in force at the time in such University, may complete his course and become a candidate for the degree of M.A., with or without Honours, in conformity with such regulations. And any such student who has passed the examination hitherto required for admission to a Curriculum of three sessions, if he desire to come under these regulations, is exempted from the Preliminary Examination herein required.

XXIX. Students may attend any classes without having passed the Preliminary Examination within the meaning of these Regulations, but such attendance will not qualify for graduation.

XXX. Attendance on classes in the Faculty of Arts in which the teaching is on the standard at present recognised for the classes hitherto known as junior or middle classes, will in no case qualify for graduation. It is competent for the University Court in each University to discontinue the Junior Classes, or Middle Classes, where such exist, in Latin, Greek, and Mathematics, when, in the opinion of the Court, the provision for Secondary Education in schools throughout the country is sufficient to render such classes no longer necessary.

XXXI. Ordinances numbered 12, 14, 18, and 69 of the Commissioners under the Universities (Scotland) Act, 1858, as altered under the provisions of the said Act, are repealed, in so far as they are inconsistent with these Regulations.

#### GRADUATION OF WOMEN.

I. It is in the power of the University Court to admit women to graduation.

II. The conditions for graduation are the same for women as for men, subject to the following modifications, which have effect until provision is made for the instruction of women in all subjects qualifying for graduation in which provision is made for the instruction of men:—

(1) Section XXV. of Regulations for Degrees in Arts is not applicable to the graduation of women in Arts.

(2) So long as within the Faculty provision is not made for the instruction of women in any subject qualifying for graduation in which provision is made for the instruction of men, it is in the power of the University Court to admit to graduation women who have received the requisite instruction in that subject in any Scottish University, or from any teacher or in any Institution, within the University town, recognised for the purposes of graduation by the University Court: Provided always that every candidate for graduation produces evidence of having



satisfied the conditions with respect to the Preliminary Examination, and be examined in all the subjects necessary for graduation by the Examiners of the University.

III. So soon as within the University provision is made for the instruction of women in all subjects qualifying for graduation in which provision is made for the instruction of men, the conditions for the graduation of women shall be the same as the conditions for the graduation of men.

IV. (1) Women who may attend classes in the University must matriculate, paying a fee of the same amount as that exigible for other students. (2) Women, who are candidates for graduation but not matriculated students, and who may attend classes within a University town, under the provisions of Section II. (2) hereof, must, at the commencement of each year of such attendance, enrol their names in a book to be kept in the University for that purpose, paying a Fee of the same amount as the Matriculation Fee paid by students of the University and having, in respect of such payment, a right to the use of the Library of the University.

#### ADDITIONAL REGULATIONS BY THE UNIVERSITY COURT.<sup>1</sup>

Any Woman who has received the requisite instruction in Chemistry, Botany, and Zoology in any Scottish University, or in the Medical College for Women, Chambers Street, Edinburgh, will (subject to the provisions of Ordinance No. 18, General No. 9, Regulations for the Graduation of Women,<sup>2</sup> &c.) be admitted to Examination in these subjects for Graduation in Arts. Women may attend within the University the advanced Courses in Botany and Zoology, and the Advanced Lecture Courses in the Chemistry Department.

#### REGULATIONS FOR SPECIAL STUDY AND RESEARCH, FOR APPOINTMENT OF RESEARCH FELLOWS, &c.

I. It is in the power of the Senatus Academicus, with the approval of the University Court, to make regulations under which graduates of Scottish Universities, or of other Universities recognised by the University Court for the purposes hereof, or other persons who have given satisfactory proof of general education and of fitness to engage in some special study or research, may be admitted to prosecute such study or research in the University.

<sup>1</sup> Extra Academical Teachers in Edinburgh, whose Lectures qualify Women Students for Graduation in Arts in this University:—

T. W. Drinkwater, Ph.D., Chemistry and Practical Chemistry, 17th December 1894.

Robert Turnbull, B.Sc., Botany, 17th June 1895.

<sup>2</sup> See Ordinance Appendix to CALENDAR, 1892-93, page 51.



II. It is the duty of the Senatus Academicus—

- (1) To receive and decide upon all applications for admission to prosecute special study or research.
- (2) To prepare a list of all persons so admitted (hereinafter referred to as Research Students).
- (3) To make regulations for the supervision of their work.
- (4) To satisfy themselves from time to time that the Research Students are carrying on their work in the University in a satisfactory manner.
- (5) To suspend or exclude from any course any student whose conduct or progress is unsatisfactory.

III. Every applicant for admission must send in to the Senatus Academicus a written application stating any degree or other distinction which he has already obtained, the line of study or research which he wishes to prosecute and the probable period of its duration, together with evidence as to his character, capacity, and general qualifications.

IV. An application for admission is in the first instance referred by the Senatus to the appropriate Faculty, or to a Committee appointed by the Senatus; one member of the Committee shall always be a Professor or Lecturer within whose department the proposed line of study or research falls. No applicant shall be recommended by the Faculty or the Committee who has not satisfied them by examination or otherwise that he is qualified to prosecute the proposed line of study or research, and further—

- (a) That his proposed line of study or research is a fit and proper one;
- (b) That he possesses a good general education;
- (c) That he is of good character;
- (d) That he proposes to prosecute his studies or research during a period to be approved by the Senatus.

The Faculty or the Committee shall make a report to the Senatus upon each application. It is also their duty, subject to the regulations of the Senatus, to provide for the supervision of the Research Student's work, and to report at least once a year to the Senatus as to his progress and conduct. The Senatus shall then determine whether he shall remain a Research Student.

V. Every Research Student is required to matriculate each year, paying the ordinary fee.

VI. Research Students have access to and the use of the University Laboratories and Museums, under such conditions as to payment and otherwise as the University Court, after consultation with the Senatus, may determine.

VII. The title of Research Fellow may be conferred by the Senatus, with the approval of the University Court, on Research Students who have shown special distinction. Such title shall not of itself confer any right to stipend, but it shall be in the power of the University Court to provide a stipend of such amount and for such period as it may think

fit to any Research Fellow under the powers of Section XI., Sub-section 8, of Ordinance 27.

VIII. (1) The Research Fellows shall be appointed as aforesaid after consideration of the report or reports submitted in terms of Section IV. hereof.

(2) The title of Research Fellow may be conferred either at the commencement of the Research Student's course of study or research, or at any time during its progress, as the Senatus may determine.

(3) Research Fellows shall retain their title and stipend, if any, for the period during which they are engaged in special study or research in the University, and no longer.

(4) Research Students who have been appointed Research Fellows shall continue to be subject to the conditions above prescribed as to the supervision of their work and the reports to be made thereon.

IX. Nothing herein contained shall prejudice the right of Research Students to such Fellowships, Scholarships, or Prizes as may be open to them by Ordinance or Deed of Foundation.

X. The University Court may, subject to the provisions of Section XI., Sub-section 8, of Ordinance 27, provide such sums as it may think fit in aid of the expenses of Special Study or Research.

REGULATIONS FOR HIGHER DEGREES IN ARTS AND SCIENCE.  
DEGREE OF D.SC.

I. Graduates who have taken the degree of Master of Arts in any Scottish University with first or second class honours in Mathematics and Natural Philosophy under the conditions prescribed by the Regulations for Degrees in Arts, or under the Regulations previously in force in such University, may offer themselves for the degree of Doctor of Science (D.Sc.) in the same University after the expiry of five years from the date of their graduation in Arts, under the same conditions as if they held the degree of Bachelor of Science.

II. Research Students within the meaning of the Regulations for the Encouragement of Special Study and Research, and for the appointment of Research Fellows may offer themselves for the degree of D.Sc. of the University in which they have prosecuted some special study or research under those Regulations, although they have not taken the degree of B.Sc. or the degree of M.A. with honours as aforesaid in that University; provided—

(1) That they hold the degree of B.Sc. or M.B. of a Scottish or any recognised University, or a degree of any such University, which the Senatus shall hold to be equivalent to the degree of B.Sc. or to the degree of M.A. with first or second class honours in Mathematics and Natural Philosophy; provided that candidates who hold any such degree from a University outside the United Kingdom may be required,

if the Senatus think fit, before beginning their course as Research Students with a view to the degree of D.Sc., to pass an examination equivalent to an Honours or to a Final Science examination in a group of subjects cognate to their line of work as Research Students.

(2) That they have spent not less than two winter sessions or an equivalent period as Research Students in the University granting the degree, and that they produce evidence of satisfactory progress in the special study or research undertaken by them during that period.

(3) That a period of not less than five years shall have elapsed from the date of the graduation required in sub-section (1) of this section.

III. All candidates for the degree of D.Sc. shall present a thesis or a published memoir or work,<sup>1</sup> to be approved by the Senatus on the recommendation of the Faculty of Science; provided that, if required by the Senatus, the candidate shall also be bound to pass such an examination conducted orally or practically, or by written papers, or by all of these methods, on the subjects of his special study or of his thesis, as may from time to time be determined. The thesis shall be a record of original research undertaken by the candidate, and shall be accompanied by a declaration signed by him that the work has been done and the thesis composed by himself.

#### DEGREE OF D.PHIL.

IV. Graduates who have taken the degree of M.A. in any Scottish University with first or second class honours in Mental Philosophy, under the conditions prescribed by Ordinance No. 11 [General No. 6—Regulations for Degrees in Arts], or under the Regulations previously in force in such University, may offer themselves for the degree of Doctor of Philosophy (D.Phil.) in the same University after the expiry of five years from the date of such graduation.

V. Research Students as aforesaid may offer themselves for the degree of D.Phil. of the University in which they have prosecuted some special study under Ordinance No. 61 [General, No. 23—Regulations for the Encouragement of Special Study and Research, and for the appointment of Research Fellows], although they have not taken the degree of M.A. with honours as aforesaid in that University; provided—

(1) That they hold the degree of M.A. with first or second class honours in Mental Philosophy of any Scottish University, or a degree of any recognised University, which the Senatus shall hold to be equivalent to such degree with honours as aforesaid; provided that candidates who hold such a degree from a University outside the United Kingdom may be required, if the Senatus think fit, before beginning their course as Research Students, with a view to the degree of D.Phil., to pass an examination equivalent to an honours examination in a group of subjects cognate to their line of work as Research Students.

<sup>1</sup> The Thesis must be lodged and the fees paid before 1st December.

(2) That they have spent no less than two winter sessions or an equivalent period as Research Students in the University granting the degree, and produce evidence of satisfactory progress in the special study undertaken by them during that period.

(3) That a period of not less than five years shall have elapsed from the date of the graduation required in sub-section (1) of this section.

VI. All candidates for the degree of D.Phil. shall present a thesis or a published memoir or work,<sup>1</sup> which shall be an original contribution to learning, to be approved by the Senatus on the recommendation of a Committee appointed by the Senatus; provided that, if required by the Senatus, a candidate shall also be bound to pass such examination, conducted orally or otherwise, on the subject of his thesis or of his special study as may from time to time be determined. The thesis, or memoir, or work shall be accompanied by a declaration signed by the candidate that it has been composed by himself. If the thesis has not already been published, it shall be published by the candidate in such manner as the Senatus shall approve.

#### DEGREE OF D.LITT.

VII. Graduates who have taken the degree of M.A. in any Scottish University with first or second class honours in any group other than Mathematics and Natural Philosophy or Mental Philosophy, under the conditions prescribed by Ordinance No. 11 [General No. 6—Regulations for Degrees in Arts], or under the Regulations previously in force in such University, may offer themselves for the degree of Doctor of Letters (D.Litt.) in the same University after the expiry of five years from the date of such graduation.

VIII. Research Students as aforesaid may offer themselves for the degree of D.Litt. of the University in which they have prosecuted some special study under Ordinance No. 61 [General No. 23—Regulations for the Encouragement of Special Study and Research, and for the appointment of Research Fellows], although they have not taken the degree of M.A. with honours as aforesaid in that University; provided—

(1) That they hold the degree of M.A. with first or second class honours in any group except Mathematics and Natural Philosophy or Mental Philosophy of any Scottish University, or a degree of any recognised University, which the Senatus shall hold to be equivalent to such degree with honours as aforesaid; provided that candidates who hold such a degree from a University outside the United Kingdom may be required, if the Senatus think fit, before beginning their course as Research Students with a view to the degree of D.Litt., to pass an examination equivalent to an honours examination in a group of subjects cognate to their line of work as Research Students.

(2) That they have spent not less than two winter sessions or an equivalent period as Research Students in the University granting the

<sup>1</sup> The Thesis must be lodged and the fees paid before 1st December.

degree, and produce evidence of satisfactory progress in the special study undertaken by them during that period.

(3) That a period of not less than five years shall have elapsed from the date of the graduation required in sub-section (1) of this section.

IX. All candidates for the degree of D.Litt. shall present a thesis or a published memoir or work,<sup>1</sup> which shall be an original contribution to learning, to be approved by the Senatus on the recommendation of a Committee appointed by the Senatus; provided that, if required by the Senatus, a candidate shall also be bound to pass such examination, conducted orally or otherwise, on the subject of his thesis or of his special study as may from time to time be determined. The thesis, or memoir, or work shall be accompanied by a declaration signed by the candidate that it has been composed by himself. If the thesis has not already been published, it shall be published by the candidate in such manner as the Senatus shall approve.

#### GENERAL.

X. Notwithstanding and in supplement of the Regulations as to Examinations, sections XIV. and XV., the Senatus Academicus in each University shall appoint such Professors or Lecturers as it may think suitable to conduct the examination of candidates who may offer themselves under the Regulations for Degrees in Science, or of these Regulations for the Degree of Doctor of Science, Doctor of Philosophy, or Doctor of Letters; and the University Court shall, after consultation with the Senatus Academicus, appoint an additional Examiner to act along with them. Such additional Examiner shall be a person of recognised eminence in the subject of the thesis, or memoir, or work which is to be submitted for approval. The result of the examination shall be reported to the appropriate Faculty or Committee of Senatus.

XI. The degrees of D.Sc. in Mental Science or D.Sc. in Philology shall no longer be conferred by any Scottish University.

XII. Candidates who have already completed the necessary attendance on classes required for the degree of D.Sc. in Mental Science or D.Sc. in Philology, under regulations hitherto in force in any Scottish University, may proceed to the degree of D.Phil., or of D.Litt., as the case may be, under this Ordinance:—provided such candidates comply with the provisions of Section VI. or Section IX. hereof, as the case may be, and that a period of not less than five years shall have elapsed from the date of their graduation as M.A.

XIII. The degrees of D.Sc., D.Phil., and D.Litt. shall in no case be conferred on persons who have not satisfied the conditions hereinbefore set forth, and shall not be conferred *honoris causa tantum*.

The fee to be paid for Examination for each of the degrees of D.Sc.

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<sup>1</sup> The Thesis must be lodged and the fees paid before 1st December.



D.Phil., and D.Litt. is ten guineas, payable when the thesis is lodged,<sup>1</sup> and the fee for each re-examination for each of the Degrees is £5, 5s.<sup>1</sup>

Candidates for Examination or Graduation must pay the Matriculation fee of £1, 1s.<sup>1</sup> Candidates for Graduation are required to enter their names and (if not previously registered) to pay the Registration fee ten days before the date of the Graduation Ceremonial.

#### TIME-TABLES OF EXAMINATIONS AND DATES FOR PRESENTING CERTIFICATES AND FOR PAYMENT OF FEES.

*Candidates are required to enter for each periodical Examination at which they desire to appear, and to state the subject or subjects in which they desire to be examined.*

The dates of the Examinations for 1901-1902 have been fixed as follows, and Candidates are required to assemble in the Examination Hall at the University a quarter of an hour before the time fixed for examination.

#### PRELIMINARY EXAMINATION.

The Preliminary Examinations are held in the Examination Hall in the University, in autumn and spring.

Each Candidate must pay a fee of 10s. 6d. for each appearance at the Preliminary Examination.

Candidates may obtain Schedules at the Matriculation Office, University (Old) Buildings, on and after 9th September 1901, and on and after 15th February 1902. The Schedules must be completed and lodged, along with the fees, not later than 18th September 1901 and 1st March 1902 for the autumn and spring Examinations respectively.

Candidates may pay the fees personally or transmit them to T. GILBERT, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts*, crossed Union Bank of Scotland (High Street branch), Edinburgh, but not by cheques on private accounts. When names are not entered and fees paid, or a Pass to the Examination obtained where the fee has been previously paid, on or before the stated dates, an additional or late-entry fee of 10s. must be paid before the Candidate can be admitted to the Examination. This fee will not be received after Twelve o'clock of the last day but one preceding the Examination for which the Candidate desires to appear, without the express permission of the Dean of his Faculty and the subsequent sanction of the Senatus. A Candidate must enter his name and pay the fee, or, when the fee has been previously paid, obtain a Pass, for each periodical Examination at which he desires to appear. A Candidate is not held to be entered until his Schedule is lodged, the Fee paid, and a Pass to the Examination obtained.

<sup>1</sup> The Thesis must be lodged and the fees paid before 1st December.



## TIME-TABLES FOR PRELIMINARY EXAMINATIONS FOR ARTS, SCIENCE, MEDICINE, AND MUSIC, AND FOR BURSARY EXAMINATIONS, 1901-1902.

		Medical Preliminary Examinations.	Arts, Science, Law (B.L.), and Music Preliminary Examinations and Bursary Examinations.
1901.			
Sept. 26	Thur.	... ..	Additional English for Ordinary Bursaries, <sup>1</sup> 9-12 Do. French do., <sup>1</sup> 1-2.30 Do. German do., <sup>1</sup> 3-4.30
,, 27	Fri.	English, 9-12 Latin, <sup>5</sup> 3-6	English, 1st paper, <sup>134</sup> 9-11 Higher Latin, 1st paper, <sup>1</sup> 12-2 Latin for Second and Third Year Bursaries, 12-3 Lower Latin, <sup>34</sup> 3-6
,, 28	Sat.	Higher Mathematics, 1st paper, <sup>2</sup> 12-2 Greek, <sup>5</sup> 3-6 Do., <sup>2</sup> 3-5	English, 2nd paper, <sup>134</sup> 9-11 Intermediate and Higher Mathematics, and Mathematics for First, Second, and Third Year Bursaries, 1st paper, <sup>1</sup> 12-2 Lower Greek, <sup>34</sup> 3-6 Anglo - Saxon, for Patterson Bursary, 9-12, 3-6
,, 30	Mon.	Higher Mathematics, 2nd paper, <sup>2</sup> 12-2 Mathematics, <sup>5</sup> 3-6	Higher Latin, 2nd paper, <sup>1</sup> 9-11 Intermediate and Higher Mathematics, and Mathematics for First, Second, and Third Year Bursaries, 2nd paper, <sup>1</sup> 12-2 Lower Mathematics, <sup>34</sup> 3-6
Oct. 1	Tu.	French, 12-3 Do., <sup>2</sup> 12-2 Mechanics, <sup>2</sup> 3-6	Higher Greek, 1st paper, <sup>1</sup> 9-11 French, 1st paper, <sup>14</sup> 12-1.30 Greek for Second and Third Year Bursaries, 3-6 Dynamics, <sup>1</sup> 3-6

<sup>1</sup> Papers for the University Ordinary First Year Bursary Examination, for the Heriot University Bursaries both for men and for women, and for the Bursaries offered by the Edinburgh Association for the University Education of Women.

The Papers for the Heriot University Bursaries for Women Students of Medicine, are the Preliminary Examination Papers pure and simple : candidates for these Bursaries as such are not required to take any of the additional Bursary Papers.

<sup>2</sup> For Students under the Old Regulations.

<sup>3</sup> Papers for the Preferential Bursary Examination.

<sup>4</sup> Papers for Music Preliminary : for Italian for Music Preliminary half-an-hour more will be allowed.

<sup>5</sup> Same as Lower Grade Papers for Arts and Science.

		Medical Preliminary Examinations.	Arts, Science, Law (B.L.), and Music Preliminary Examinations and Bursary Examinations.
1901.	2 Wed.	German, 3-6 Do., <sup>2</sup> 3-5	Higher Greek, 2nd paper, <sup>1</sup> 9-11 French, 2nd paper, <sup>14</sup> 12-2 German, 1st paper, <sup>14</sup> 3-4.30 Logic and Psychology for Third Year Bursaries, 3-6 German, 2nd paper, <sup>14</sup> 9-11 Italian, <sup>14</sup> 12-1.30, 3-5 Elementary Physics, <sup>4</sup> 9-11 Logic, <sup>4</sup> 2-4 Additional Latin and Greek for Ordinary Bursaries, <sup>1</sup> 9-12 Classics for Second and Third Year Bursaries, 9-12 Additional Mathematics for Ordinary Bursaries, and for Second and Third Year Bursaries, <sup>1</sup> 2-5
	3 Thur.	Moral Philosophy, <sup>2</sup> 9-11	Higher Geometry for John Welsh Bursaries and for Kelland Prize, 9-12
	4 Fri.	Natural Philosophy, <sup>2</sup> 9-11 Logic, <sup>2</sup> 2-4	Sanskrit, Hebrew, Arabic, Syriac, Celtic. (See § IV. (3) of Regulations).—9-12 Gaelic for Mackinnon and Ardvorlich <sup>5</sup> Bursaries, 12-3 Chemistry for Baxter of Balgavies Bursary, <sup>5</sup> 12-2
	5 Sat.	... ..	
	8 Tues.		MEETING OF PRELIMINARY EXAMINERS.
	11 Fri.		MEETING OF JOINT BOARD } At 10 A.M.
	12 Sat.		MEETING OF JOINT BOARD } each day.
	15 Tues.		CLASSES OPEN.
1902.			
1902.	28 Fri.	English, 9-12 Latin, <sup>5</sup> 3-6	English, 1st paper, <sup>4</sup> 9-11 Higher Latin, 1st paper, 12-2 Lower Latin, <sup>4</sup> 3-6

Papers for the University Ordinary First Year Bursary Examination, for the Heriot University Bursaries both for men and for women, and for the Bursaries offered by the Edinburgh Association for the University Education of Women.

The Papers for the Heriot University Bursaries for Women Students of Medicine are Preliminary Examination Papers pure and simple: candidates for these Bursaries are not required to take any of the additional Bursary Papers.

For Students under the Old Regulations.

Papers for Music Preliminary.

Not open in 1901.

<sup>6</sup> Same as Lower Grade Papers for Arts and Science.

		Medical Preliminary Examinations.	Arts, Science, Law (B.L.), and Music Preliminary Examinations and Bursary Examinations.
1902.			
Mar. 29	Sat.	Higher Mathematics, 1st paper, <sup>2</sup> 12-2 Greek, <sup>5</sup> 3-6 Do., <sup>2</sup> 3-5	English, 2nd paper, <sup>4</sup> 9-11 Intermediate and Higher Mathematics, 1st paper, 12-2 Lower Greek, <sup>4</sup> 3-6
„ 31	Mon.	Higher Mathematics, 2nd paper, <sup>2</sup> 12-2 Mathematics, <sup>5</sup> 3-6	Higher Latin, 2nd paper, 9-11 Intermediate and Higher Mathematics, 2nd paper, 12-2 Lower Mathematics, <sup>4</sup> 3-6
April 1	Tu.	French, 12-3 Do., <sup>2</sup> 12-2 Mechanics, <sup>2</sup> 3-6	Higher Greek, 1st paper, 9-11 French, 1st paper, <sup>4</sup> 12-1.30 Dynamics, 3-6
„ 2	Wed.	German, 3-6 Do., <sup>2</sup> 3-5	Higher Greek, 2nd paper, 9-11 French, 2nd paper, <sup>4</sup> 12-2 German, 1st paper, <sup>4</sup> 3-4.30
„ 3	Thur.	Moral Philosophy, <sup>2</sup> 9-11	German, 2nd paper, <sup>4</sup> 9-11 Italian, <sup>4</sup> 12-1.30, 3-5
„ 4	Fri.	Natural Philosophy, <sup>2</sup> 9-11 Logic, <sup>2</sup> 2-4	Elementary Physics, <sup>4</sup> 9-11 Logic, <sup>4</sup> 2-4
„ 8	Tu.	MEETING OF PRELIMINARY EXAMINERS.	
„ 11	Fri.	MEETING OF JOINT BOARD } At 10 A.M.	
„ 12	Sat.	MEETING OF JOINT BOARD } each day.	

## FEES FOR DEGREE OF M.A.

Candidates for the Ordinary Degree pay for each of the subjects of Astronomy, Chemistry, Zoology, Botany, or Geology £1, 1s., and for each of the other subjects 15s.

Those who fail in the Examinations pay 10s. 6d. for re-examination in each subject.

Candidates for the Degree, with Honours, pay the same total fees as for the Ordinary Degree.

DEGREE EXAMINATIONS.<sup>6</sup>

*Candidates are required to enter for each periodical Examination at which they desire to appear, and to state the subject or subjects in which they desire to be examined.*

Candidates may obtain Schedules at the Matriculation Office.

<sup>2</sup> For Students under the Old Regulations.

<sup>4</sup> Papers for Music Preliminary.

<sup>5</sup> Same as Lower Grade Papers for Arts and Science.

<sup>6</sup> When names are not entered and fees paid, or a Pass to the Examination obtained where the fee has been previously paid, on or before the stated dates, an additional or late-entry fee of ten shillings must be paid before the Candidate can be admitted to examination. This fee will not be received after twelve o'clock of

Schedules must be lodged, Certificates shown, and Fees paid as follows :—

1. For the Examinations in October 1901, *not later than 3rd October.*<sup>1</sup>

2. For the Examinations in Spring 1902 Schedules must be lodged<sup>1</sup> and Fees paid *not later than 3rd March*, and the Matriculation Tickets and Class Certificates must be shown as follows :—For the Examinations in March at least *two clear days before* the date of the Examination in each subject ; for the Examinations in April, *not later than 27th March.*

3. For the Examinations in Chemistry and Geology in summer 1902, Schedules must be lodged and Fees paid *not later than 4th July*, and Certificates shown on *Wednesday, 6th July.*

When the Candidate has exhibited his Matriculation Tickets and the Certificates for Examination, the Clerk will stamp on the Receipt for the Fee the words, "Certificates examined," which entitle the Candidate to admission to the Examination Hall.

Candidates for Examination or for Graduation must be Matriculated Students of the Academic year.

Every Candidate for Graduation must produce certificates of having passed the necessary Examinations and pay the Fee of £1 for Registration as a Member of the General Council *at least one clear day before the date of Graduation.*<sup>2</sup>

The fees for Matriculation, Examinations for Degrees, and Registration of Graduates as Members of the General Council, are payable at the Matriculation Office, University. Candidates may pay the fees personally, or transmit them to T. GILBERT, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts*, crossed "*Union Bank of Scotland (Hunter Square Branch), Edinburgh,*" but not by cheques on private accounts.

Degrees are conferred by the Chancellor or the Vice-Chancellor of the University. They are not conferred *in absentia*, except on very special cause shown. Candidates must appear in Academic costume, with the appropriate hood.<sup>3</sup>

On the last day but one preceding the Examination for which the Candidate desires to appear, without the express permission of the Dean of his Faculty and the subsequent sanction of the Senatus. A Candidate must enter his Name and pay the Fee, or, when the Fee has been previously paid, obtain a Pass, for each periodical Examination at which he desires to appear.

<sup>1</sup> Candidates for Special Examination in Greek for Honours in Mental Philosophy must enter their names, and state which dialogue of Plato they offer, one month before the date of the examination.

<sup>2</sup> See footnote 6, page 126.

<sup>3</sup> Black silk lined with *white*.

## TIME-TABLES FOR M.A. EXAMINATIONS FOR 1901-1902.

		M.A. Pass Examinations. <sup>1</sup>	M.A. Honours Examinations. <sup>1</sup>
1901.			
Oct. 8	Tu.	English, 9-11, 11.30-1.30 Latin, 2.30-4.30	
" 9	Wed.	Latin, 9-11 Greek, 11.30-1.30 <sup>2</sup> , 2.30-4.30	
" 10	Th.	Mathematics, 9-11, 11.30-1.30 Natural Philosophy, 2.30-4.30	
" 11	Fri.	Natural Philosophy, 9-11 Logic, 11.30-1.30, 2.30-4.30	
" 12	Sat.	Moral Philosophy, 9-11, 11.30-1.30 History, 2-4	
" 14	Mon.	History, 9-11 French, 11.30-1.30, 2-4	
" 15	Tu.	CLASSES OPEN German, 9-11, 11.30-1.30 German Essay, 2-3 French Essay, 3-4	
" 16	Wed.	Education (M.A. & Diploma), 9-11, 11.30-1.30	
" 17	Th.	Education (Diploma only), 9-11.30	
" 28	Mon.	Constitutional Law & History, 2-4	
" 29	Tu.	Roman Law, 9-11 Constitutional Law & History, 2-4	
" 31	Th.	Philosophy of Law, 9-11 Public International Law, 11.30-1.30 Political Economy, 2-4	
Nov. 1	Fri.	Political Economy, 9-11	
1902.			
Mar. 17	Mon.	Constitutional Law & History, 2-4	

NOTE.—In the Examinations for the Degree of M.A. in Roman Law, Public Law, and Constitutional Law and History, candidates who intend to proceed later to the Degree of LL.B. must pass on the LL.B. standard.

<sup>1</sup> The order of the papers set at the particular hours fixed for the general Honours Subject within any department or group, may be varied at the discretion of the Examiners.

<sup>2</sup> It is impossible to avoid clashing between the hours of Examinations in the Pass Honours and Scholarship subjects, and Candidates should carefully consider early in their Curriculum the arrangements for these Examinations, in order, so far as possible, to avoid clashing.

<sup>3</sup> Also Special Examination in Greek for Candidates for Honours in Mental Philosophy who have not included Greek as a Subject in the Examinations for the ordinary Degree of M.A.

		M.A. Pass Examinations. <sup>1</sup>	M.A. Honours Examinations. <sup>1</sup>
1902.			
Mar. 18	Tu.	Roman Law, 9-1	
		Constitutional Law & History, 2-4	
" 20	Th.	Philosophy of Law, 9-11	
		Public International Law, 11.30-1.30	
		Political Economy, 5-7	
		Sanskrit, 9-11, 11.30-1.30	
		Arabic and Syriac, 9-11, 11.30-1.30	
" 21	Fri.	Political Economy, 5-7	
" 24	Mon.	Chemistry, 10-12	
		Geology, 1-3	
		Practical Chemistry Examination and Oral Examinations in Science Subjects may begin	
		Botany, 10-12	
" 25	Tu.	Zoology, 1-3	
		Celtic, 9-11, 11.30-1.30	
" 26	Wed.	Hebrew, 2.30-4.30	
		Hebrew, 9-11	
" 27	Th.	History, 11-1, 2-4	
" 28	Fri.	English, 9-11	Economic Science, 9-12, 2-5
		Latin, 12-2	
		Education, (M.A. & Diploma), 2.30-4.30, 5-7	
" 29	Sat.	English, 9-11	Economic Science, 9-12
		Mathematics, 12-2	
		Logic, 2.30-4.30	
		Education for Schoolmaster's Diploma only (3rd paper), 5-7	
" 31	Mon.	Latin, 9-11	English (Lit.), 9-12, 2-5
		Mathematics, 12-2	History (Constit.), 9-12, 2-5
		Logic, 2.30-4.30	
Apr. 1	Tu.	Greek, 9-11,	English (Lit.), 9-12, 2-5
		French, 11.30-1.30	History (Constit.), 9-12, 2-5
		Astronomy, 2-4, 4.30-6.30	Classics (Optional Subjects), 9-12, 2-5
			Pure Mathematics, 9-12

<sup>1</sup> See footnote 1, page 128.



		M.A. Pass Examinations. <sup>1</sup>	M.A. Honours Examinations. <sup>1</sup>
1902. Apr. 2	Wed.	Greek, 9-11 French, 12-2 German, 3-5	English (Lang.), 9-12, 2-5 Classics, 9-12, 2-5 Modern Languages, 9-12, 2-5 Logic, 9-12, 2-5 Pure Mathematics, 9-12, 2-5 History, 9-12, 2-5 English (Hist.), 9-12, 2-5 Classics, 9-12, 2-5 Modern Langs., 9-12, 2-5 Logic, 9-12 Moral Philosophy, 2-5 Pure Mathematics, 9-12 Natural Philosophy, 2-5 History, 9-12, 2-5 Classics, 9-12, 2-5 Mod. Languages, 9-12, 2-5 Moral Philosophy, 9-12, 2-5 Natl. Philosophy, 9-12, 2-5 History of Art, 9-12, 2-5 Classics, 9-12, 2-5 Mod. Languages, 9-10.30, 11.30-1
,, 3	Th.	German, 9-11 Moral Philosophy, 11.30-1.30, 3-5	
,, 4	Fri.	Natural Philosophy, 9-11, 11.30-1.30 French Essay, 2-3 German Essay, 3-4	
,, 5	Sat.	Archæology and Art, 9-11, 11.30-1.30	
,, 11	Fri.	<div style="display: flex; align-items: center; justify-content: center;"> <div style="font-size: 3em; margin-right: 10px;">{</div> <div> GRADUATION  COMMEMORATION </div> </div>	CEREMONIAL at 10 A.M. TITION SERVICE at 12 noon.
July 18	Fri.		
,, 19	Sat.		
		Chemistry, 10-12 Geology, 1-3 Oral Examinations may begin Practical Chemistry Examination begins In 1902 the Examinations in Botany and Zoology will take place in October instead of in July	
,, 26	Sat.	GRADUATION	CEREMONIAL.

<sup>1</sup> See footnote 1, page 128.

PASS EXAMINATIONS FOR MASTER OF ARTS.

(See Time-Tables, Pages 128-130.)

The subjects for the Examinations for the Ordinary Degree in October 1901 and April 1902 are as follows :—

I.—DEPARTMENT OF LANGUAGE AND LITERATURE.

1. *Latin for October 1901 and April 1902.*

Virgil, *Eclogues* and *Aen.* ii.—Horace, *Odes*, ii. and *Satires* i. (Palmer's Edition).—Cicero, *Pro Murena*.—Tacitus, *Histories* i.

Translation from an Author or Authors not prescribed. Latin prose composition.

*Roman History*.—A general knowledge of Roman History to the death of Trajan, and a more special study of the times or events to which prescribed books relate.

*Roman Literature*.—A general knowledge of the course of Roman Literature to the death of Trajan, and a special knowledge of the Lives and Works of Virgil, Horace, Cicero, and Tacitus.

*Every Candidate is required to satisfy the Examiners in translating English into Latin prose.*

2. *Greek for October 1901 and April 1902.*

Homer, *Odyssey* xvii.—Sophocles, *Ajax*.—Demosthenes, *Androtion*.—Thucydides, iii. Translation from an Author or Authors not prescribed. Greek prose composition.

*Greek History*.—A general knowledge of Greek History to the death of Alexander, and a more special knowledge of the period of the Peloponnesian War.

*Greek Literature*.—A general knowledge of Greek Literature to the end of the 4th cent. B.C., and a more special knowledge of the prescribed Authors.

Laws of Hexameter and Iambic verse.

3. *English for October 1901 and for April and October 1902.*

The Principles of English Composition and Style: Class Lectures. History of the English Language: The First Five Chapters of Morris's "Historical Outlines of English Accidence." History of English Literature: Lectures, with the Professor's "Short History of English Literature," and the portions of Hallam's "Literature of Europe" that relate to English writers.

*Special Books for October 1901*—Shakespeare, *Macbeth* and *A Midsummer Night's Dream*—Chaucer, *Squieres Tale*—Spenser, *Faerie Queene*, Book ii.—Milton, *Comus* and *Lycidas*—Dryden, *Selected Poems*—Pope, *Selected Satires* and *Epistles*—Johnson, *Lives of Pope and Dryden*—Wordsworth, *Selections*—Browning, *Dramatis Personae*.

*Special Books for April and October 1902*—Shakespeare, *Hamlet* and *As You Like It*—Chaucer, *Prologue to Canterbury Tales*—Spenser, *Faerie Queene*, Book iii.—Milton, *Samson Agonistes*—Browne, *The*

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*Garden of Cyrus*—Addison, *Selected Essays*—Cowper, *Selected Poems*—Coleridge, *Selected Poems*—Tennyson, *The Holy Grail*.

### 4. *French for October 1901.*

Brachet, *Morceaux choisis du 16<sup>e</sup> Siècle* (Hachette)—Racine, *Athalie*—Molière, *Misanthrope*, *Femmes Savantes*—La Bruyère, *Caractères*—Saint-Simon, *Mémoires* (Extracts, Hachette)—Victor Hugo, *Hernani*, *Extraits*, *Poésies* (Delagrave)—Taine, *Littérature anglaise* (5th vol.).

*Books recommended:*—Saintsbury, *History of French Literature*—Lanson, *Littérature française*—Rimbaud, *Civilisation française*—Mignet, *Révolution française*.

Passages from French Authors not prescribed. French prose composition. A general knowledge of the development of the French language. A general knowledge of French history, and of the history of French Literature, with a more minute knowledge of the period 1789-1889.

*Every Candidate is required to satisfy the Examiners in translating English into French prose.*

### *French for April and October 1902.*

Clédat, *Morceaux choisis de Moyen Age*—Brachet, *16<sup>e</sup> Siècle*—Corneille, *Cinna*—Molière, *Misanthrope*, *Femmes Savantes*—Marcou, *Prosateurs français*—Lanson, *Lettres choisies du 17<sup>e</sup> Siècle*—Lanson, *Lettres choisies du 18<sup>e</sup> Siècle*—Voltaire, *Siècle de Louis XIV.*—Victor Hugo, *Les Chatiments*, *Hernani*, *Chefs d'œuvre en Prose*—Jullian, *Extraits des Historiens français*—Taine, *Notes sur l'Angleterre*—Augier, *Le gendre de M. Poirier*—*Annales Politiques et Littéraires*, 1901-2.

*Books recommended:*—Saintsbury, *History of French Literature*—Lanson *Littérature française*—Rimbaud, *Civilisation française*—Mignet, *Révolution française*.

Passages from French Authors not prescribed. French prose composition. A general knowledge of the development of the French language. A general knowledge of the growth of French civilisation, with a more minute knowledge of the authors prescribed.

*Every Candidate is required to satisfy the Examiners in translating English into French prose.*

### 5. *German for October 1901.*

*Die deutsche Heldensage*, Jiriczek (Göschel)—*Walther von der Vogelweide und Auswahl aus Minnesang und Spruchdichtung*, ed. Güntter (Göschel)—Hans Sachs, *Auswahl*, ed. Kinzel (Halle, Waisenhaus)—*Das deutsche Volkslied*, ed. Matthias (Velhagen)—Lessing, *Minna von Barnhelm*, ed. Buchheim—Schiller, *Maria Stuart*, ed. Breul—Schiller, *Balladen*, ed. Johnson (Heath)—Goethe, *Egmont*—Grillparzer, *Sappho*, ed. Rippmann (Macmillan)—Riehl, *Kulturgeschichtliche Novellen*, ed. Wolstenholme (Pitt Press)—Freitag, *Rittmeister von Altrosen*, ed. Hatfield (Heath).

Passages from German Authors not prescribed. German Prose Composition and Essay. A general knowledge of the history of the German language, of the political history of Germany, and of the history of German literature, with a more minute knowledge of the Authors prescribed, and of the "classical period" in particular.

Books recommended for reference :—O. Weise, *Unsere Muttersprache*—D. Müller, *Leitfaden der deutschen Geschichte*—Günther, *Deutsche Kulturgeschichte* (Göschel)—G. Klee, *Grundzüge der deutschen Literaturgeschichte*—Roquette, *Geschichte der deutschen Dichtung*.

Every Candidate is required to satisfy the Examiners in translating from and into German.

#### German for April and October 1902.

*Der Nibelungen Not* (Sammlung Göschel)—Brant, *Luther, Sachs, Fischard*, ed. Pariser (Göschel)—*Deutsche Heldensage* (Sammlung Göschel)—Goethe, *Egmont*, ed. Buchheim (Clar. Press)—Schiller, *Die Jungfrau von Orleans*, ed. Buchheim (Clar. Press)—H. v. Kleist, *Prinz von Homburg*, ed. Kade (Graeser)—G. Freytag, *Die verlorene Handschrift*, ed. Hewett (Macmillan)—Riehl, *Die Ganerben*, ed. Wolstenholme (Pitt Press)—Fontane, *Vor dem Sturm*, ed. Weiss (Macmillan)—*Deutsche Lyrik*, ed. Buchheim (Macmillan)—H. Seidel, *Der Schatz und Anderes* (Liebeskind).

Passages from German Authors not prescribed. German prose composition. A general knowledge of the development of the language. A general knowledge of German History, and of the History of German Literature, with a more minute knowledge of the Authors prescribed and of the period 1740-1830.

Every Candidate is required to satisfy the Examiners in translating from and into German.

For Books read in the Classes and for short Courses see outline of Courses.

#### 6. Sanskrit and Comparative Philology.

*Hitopadeśa* (Johnson's ed., 1847), book i.—*Nalopākhyānam* (Bühler's ed.), cantos 1-12—Sanskrit Grammar—Sanskrit prose composition.

A general knowledge of the history of Sanskrit Literature.

#### 7. Semitic Languages.

*Hebrew*.—1. Questions in Grammar. 2. Translation into Hebrew Prose. 3. Deuteronomy, Isaiah i.-xii.; Psalms, books iii. and iv.; short passage from a historical book to translate at sight. 4. *Hebrew History and Literature* during the period of the Monarchy.

*Syriac*.—1. Questions in Grammar. 2. Translation into Syriac Prose. 3. *Book of Acts* in the Peshitta Version; *Syriac Chronicle of Barhebraeus* (extracts ix. and x. of Rüdiger's *Chrestomathia Syriaca*); *Poems of Ephrem Syrus* (*ibid.*, extract xviii.); *Chronicle of Joshua the Stylite* (ed. Wright), chaps. vii.-xxxii.; short passage of easy prose to translate at sight. 4. History of the Syriac Versions of the Scriptures in detail (Wright's *Short History of Syriac Literature*, pp. 1-107).

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*Arabic*.—1. Questions in Grammar. 2. Translation into Arabic Prose. 3. Bruennow's *Chrestomathy of Arabic Prose Pieces*, pp. 1-22, 44-55; *The Kor'an*, Sûra iii.; *Kalilah wa-Dimnah* (Beyrout Edition, 1888), pp. 105-123; short passage of easy prose to translate at sight. 4. *Arabian History*.—Sir W. Muir's, *The Caliphate: its Rise, Decline, and Fall*.—Chapters 1-45 and 64-67.

### 8. *Celtic*.

*Modern Gaelic* (Scottish and Irish)—Ossian, Fingal, Books iv.-vi.; the Poems of Alexander Macdonald, or Keating's Three Shafts of Death.

*Old Gaelic*.—*Fis Adamndin* (Windisch's Irische Texte).

Passages in Old and Modern Gaelic (both Scottish and Irish) from Authors not prescribed.

Translation from English into Gaelic Prose (Scottish or Irish).

*History and Literature*.—The History of Gaelic Literature from 1000 A.D. to 1560.

## II.—DEPARTMENT OF MENTAL PHILOSOPHY.

### 1. *Logic and Psychology*.

The elementary doctrines of Logic and Psychology; and the History of Philosophy so far as treated in the Class Lectures.—Locke's *Essay*, Book ii., Chapters 1-12, and Chapter 23; Professor Fraser's "*Selections from Berkeley*" (fifth edition)—"Editor's Introduction," "Principles of Human Knowledge," "Divine Visual Language: a Dialogue"; Hume's *Enquiry concerning Human Understanding*.—Sections 1-7 inclusive.

### 2. *Moral Philosophy*.

The Professor's "Ethical Principles"; Butler's Three Sermons "On Human Nature"; Mill's "Utilitarianism"; Spencer's "Data of Ethics"; Sidgwick's "Outlines of the History of Ethics."

### 3. *Commercial and Political Economy*.

The subjects of examination are: The Lectures of the Professor; Mill's *Principles of Political Economy*, Books i.-iii.; Marshall's *Economics of Industry* (new edition); Adam Smith's *Wealth of Nations*, Book iv.; Professor Nicholson's *Money and Monetary Problems* (5th edition),—*The Treatise on Money*.

### 4. *Theory, Art, and History of Education*.

*Theory and Art*.—Subjects of examination: Lectures of the Professor; Locke's *Thoughts* (parts which deal with moral training); Locke on the Conduct of the Understanding; *Language and Linguistic Method in the School*, by Professor Laurie (3rd edition); Comenius' *Great Didactic*, as in "*The Educational Life and Writings of Comenius*" by Professor Laurie.

The Theory or Science of Education comprises the Psychology and Ethics in Laurie's "*Institutes of Education*" (2nd edition).

*History*.—A knowledge of Bacon and Ratke, as in the introduction



to Laurie's *Comenius*, last edition ; and a general knowledge of Rousseau and Pestalozzi, as in Compayrè's Manual and Quick's Educational Biographies.

5. *Philosophy of Law.*

*Vide under Faculty of Law.*

III.—DEPARTMENT OF SCIENCE.

1. *Mathematics.*

Arithmetic.—Euclid, Books i., ii., iii., iv., vi., and xi., or their equivalent, with their application to Mensuration.—Algebra, Trigonometry, Conic Sections, Geometrical and Analytical.

*Candidates must show sufficient knowledge in each of these subjects.*

2. *Natural Philosophy.*

Elementary Dynamics, Astronomy and Experimental Physics.

*Candidates must show sufficient knowledge both of Dynamics and of Experimental Physics.*

3. *Practical Astronomy.*

The Class Lectures.—Use of the Sextant, Transit-Circle, Wire and Ring Micrometers.—Young's General Astronomy ; Main's Practical and Spherical Astronomy, or corresponding portions of Brünnow's or Chauvenet's Astronomy. Sir John Herschel's Outlines of Astronomy, omitting Part IV.

4. *Chemistry.*

Chemical changes as distinguished from physical changes. Elements ; compounds ; mixtures. Laws of chemical combination by weight and by volume. The atomic theory. Atoms ; molecules. Avogadro's Hypothesis. Molecular weights of gaseous and volatile substances. Atomic weights. Law of Dulong and Petit. Chemical Notation—Symbols ; formulæ ; equations. Simple chemical calculations.

The non-metallic elements and their chief compounds ; especially the compounds of oxygen, of hydrogen, and of chlorine, with the other non-metals. The more important inorganic acids. The atmosphere. Combustion. Oxidation and reduction.

The following metallic elements and their chief compounds ; especially those with oxygen, with chlorine, and with sulphur : Gold, platinum, silver, mercury, lead, antimony, tin, copper, bismuth, zinc, cadmium, iron, aluminium, chromium, manganese, barium, strontium, calcium, magnesium, potassium, sodium.

The following salts : the ammonium salts ; the more important sulphates, sulphites, thiosulphates, nitrates, nitrites, carbonates, bromides, iodides, iodates, phosphates, borates, silicates.

The relations of bases, acids, and salts. Electrolysis. Quantivalence. The periodic law.

The metallurgy of silver, mercury, copper, lead, tin, zinc, iron (including cast iron and steel). Alloys, such as brass, bronze, solder, type-metal. Amalgams.



The manufacture of aluminium, magnesium, potassium, sodium, glass, porcelain, mortar, gunpowder, sulphuric acid, sodium carbonate and bicarbonate, caustic soda, bleaching powder and chlorates, wrought-iron, steel, white lead.

Classification of Carbon Compounds. Marsh Gas and its Homologues. Chloroform. Methyl and Ethyl Alcohols and Ethers. Substituted ammonias and ammonium salts. Formic and Acetic Acids, Aldehyde, Acetone, Chloral, Olefiant Gas, Acetylene, Oxalic Acid, Lactic Acid. Tartaric Acid, Citric Acid. Fats and Oils, Saponification, Glycerine. Cellulose, Sugars, Starch. Distillation of Wood and of Coal. Benzene, Benzoic Acid, Phenol, Salicylic Acid, Oil of Bitter Almonds. Hydrocyanic Acid, Cyanides, Cyanates, Thiocyanates, Urea, Uric Acid.

#### 5. *Practical Examination.*

(a) Simple inorganic preparations on a small scale, especially such as involve the formation and decomposition of the commoner salts.

(b) The qualitative examination of single substances. The substances given for examination may be :—Salts in solution ; solid salts soluble in water ; carbonates, sulphides, and oxides, insoluble in water but soluble in acids ; metals. The salts given are confined to those derived from the metals and salt radicals named in the following lists :—

Silver, Mercurous, Mercuric, Cupric, Lead, Stannous, Cadmium, Bismuth, Antimony (*Tartar Emetic* may be given), Arsenious, Zinc, Manganous, Ferrous, Ferric, Chromic, Aluminium, Calcium, Barium, Strontium, Magnesium, Ammonium, Sodium, Potassium.

Carbonate, Sulphite, Thiosulphate, Sulphide, Hypochlorite (Bleaching solution), Nitrite, Chloride, Bromide, Iodide, Cyanide, Sulphate, Chromate, Orthophosphate, Arsenate, Arsenite, Borate, Oxalate, Nitrate, Chlorate, Acetate.

(c) Acidimetry and Alkalimetry.

(For further information see the *Practical Chemistry Class Book* "Salts and their Reactions," published by James Thin.)

#### 6. *Zoology.*

(a) The General Principles of Biology.

(b) The distinctive characters of the Invertebrate groups and the structure, habits, &c., of *Amœba*, *Paramœcium*, *Hydra*, *Lumbricus*, *Nereis*, *Hirudo*, *Anodon*, *Buccinum*, *Helix*, *Nephrops*, and *Periplaneta*.

(c) The distinctive characters of the Vertebrate groups and the structure, habits, &c., of *Gadus*, *Raia*, *Rana*, *Columba*, and *Lepus*.

(d) A general knowledge of the orders of Vertebrata.

(e) The outlines of the development of *Amphioxus*, *Scyllium*, *Rana*, *Gallus*, and *Lepus*, and of the characteristic larval forms of *Echino-dermata*, *Crustacea*, *Annelida*, and *Mollusca*.

(f) The Geographical Distribution of Animals.

#### 7. *Botany.*

The characteristic features of the following groups and classes of the vegetable kingdom :—

Thallophyta [Schizophyta, Algæ, Fungi]; Muscinæ [Hepaticæ, Musci]; Pteridophyta [Filicineæ, Equisetineæ, Lycopodineæ]; Phanerogamæ [Gymnospermæ, Angiospermæ (Monocotyledones, Dicotyledones)].

The fundamental facts and principles of Organography, Physiology, and Geographical Distribution.

The life-history of the following plants:—Bacterium, Nostoc, Spirogyra, Saccharomyces, Mucor, Vaucheria, Agaricus, Collema, Puccinia, Claviceps, Eurotium, Marchantia, Fucus, Polysiphonia, Funaria, Aspidium, Equisetum, Selaginella, Pinus, Cycas, Scilla, Capsella, Helianthus, Ulmus, Quercus.

The characters of plants belonging to the chief British natural orders of Phanerogamæ.

### 8. *Geology including Mineralogy.*

1. *Dynamical Geology.*—The nature and operation of geological agents:—The Atmosphere, Rain, Terrestrial Waters, Ice, the Sea, Plants and Animals, Volcanoes, Movements of the Earth's Crust.

2. *Mineralogy.*—Characters of the chief rock-forming minerals.

3. *Petrology.*—Megascopic and Microscopic Characters, Composition, Origin and Distribution of the more important Rocks.

4. *Structural Geology.*—Structure of Rock-masses, Bedding, Joints, Cleavage, Foliation, Metamorphism, Faults, Unconformity.

5. *Stratigraphical Geology.*—History of the Geological Systems of the British Islands.

6. *Paleontological Geology.*—Characters, and distribution in time, of the more important Genera and Orders found fossil in Britain.

7. *Physiographical Geology.*—Origin of the present outlines of the Earth's surface.

## IV.—DEPARTMENT OF HISTORY AND LAW.

### 1. *History.*

#### *Subject of Examination for 1901-1902.*

General British History, viz.:—(1) History of the British Isles from B.C. 55 to A.D. 1837, in outline; (2) The same from 1603 to 1689, in detail.

The Examiners will attach greater importance to a grasp of principles than to mere knowledge of details.

Books recommended:—(a) For the *General History*, Gardiner's "Student's History of England," or Ransome's "Advanced History of England," Green's "Short History of the English People," Bright's "History of England," Hume Brown's "History of Scotland," Morris' "History of Ireland." (b) For the *Special Period*, Gardiner, "Puritan Revolution" (Epoch Series); Hallam, "Constitutional History of England"; Harrison, "Oliver Cromwell"; Macaulay, "History of England"; Burton, "History of Scotland."

2. *Archæology and Art (History of).*

The subjects for examination will be the Class lectures, the Professor's Manual "The Fine Arts," Conway's "Dawn of Art in the Ancient World," Tarbell's "History of Greek Art," Poynter's "Classic and Italian Painting." Candidates will be expected to show some knowledge of the original authorities for the different periods of Art History.

3. *Constitutional History and Constitutional Law.*

Subjects of examination: Constitutional History and Law of England, as treated of in the Lectures, and in the works of Stubbs, Hallam, and May; and that of the U.S. of America, of France, of Germany, and of Switzerland, as treated of in the Lectures, and in the works of Bancroft, Bryce, Adams and Cunningham, Dareste, Demombynes, &c.

4. *Roman Law.*

Subjects of examination: (1) The history of the law from the foundation of Rome to the time of Justinian, and (2) a general knowledge of the principles and doctrines of the Law. Maine's "Ancient Law," and Muirhead's "Historical Introduction," are recommended for the historical part, and Justinian's Institutes, Bk. i. to Bk. iv., Tit. viii. (inclusive), must be professed for the doctrinal part.

5. *Public Law.*

I. *The Philosophy of Law.*

Green, Principles of Political Obligation; Ritchie, Natural Rights; Lorimer, Institutes of Law; Ahrens, *Cour de Droit Naturel*; Bluntschli, *The Theory of the State*. The Student's Austin; Holland, Jurisprudence; Pollock, First Book of Jurisprudence; Sir H. Maine's works.

II. *Public International Law.*

Wheaton's History of the Law of Nations, Nys's *Les Origines du Droit International*, Hall's *International Law*.

## EXAMINATIONS FOR GRADUATION IN ARTS WITH HONOURS.

(*Examinations for Honours are held in April only.*)

(See Time-Table of Examinations, pp. 128-130.)

### I.—CLASSICS.

*N.B.*—It should be understood that a general acquaintance with the Greek and Latin writers of the classical age will be expected from all candidates; and unseen passages from other than the prescribed authors will form an important part of the examination.

The subjects of Examination for the Degree of Master of Arts with Honours in 1902 and 1903 are as follows:—

*1. Latin for 1902.*

Virgil—Plautus, *Trinummus*, *Stichus*—Lucretius, v.—Horace, *Epp.* ii., and *Ars Poetica*—Cicero's *Letters*, Watson's *Selection*, parts i. and ii.—Tacitus, *Histories*.

Latin prose composition—Translation from Authors not prescribed.

Candidates may also offer Verse Composition.

*Roman History*.—A general knowledge of Roman History to the death of Trajan, and a more minute knowledge of the periods 70-44 B.C., and 54-79 A.D.

*Roman Literature*.—A general knowledge of the course of Roman Literature, and a more minute knowledge of the Lives and Writings of the Authors prescribed.

*Latin for 1903.*

Horace—Ennius and Lucilius (in Merry's Fragments of Roman Poetry)—Catullus (R. Ellis' Selection)—Martial, i.-vi. (Sellar and Ramsay's Selection)—Cicero, *Letters to Atticus*, i.-vi.—Tacitus, *Annals*, i.-ii.—Quint., *Inst. Orat.*, x.

Latin prose composition—Translation from Authors not prescribed.

Candidates may also offer Verse Composition.

*Roman History*.—A general knowledge of Roman History to the death of Trajan, and a more special knowledge in connection with the Historical Books prescribed.

*Roman Literature*.—A general knowledge of the course of Roman Literature, and a more minute knowledge of the Lives and Writings of the Authors prescribed.

*2. Greek for 1902.*

Homer, *Odyssey*, xiii.-xxiv.—Bacchylides, *Odes*, v., vi., ix., xi., xvii., xviii.—Aristophanes, *Vespæ*—Thucydides, vii.—Demosthenes, *De Cor.*—Aristotle, *Poetics*.

Greek prose composition—Translation from Authors not prescribed. Candidates may offer Verse Composition.

*Greek History*.—A general knowledge of Greek History to the death of Alexander, and a more minute knowledge of the development of the Athenian constitution (with special reference to Aristotle's *Constitution of Athens*).

*Greek Literature*.—A general knowledge of Greek Literature, and a more minute knowledge of the Authors prescribed.

*Greek Grammar*.—As a special subject, Monro's *Homeric Grammar* (the part relating to Homeric Syntax).

*Greek for 1903.*

Homer, *Iliad*, i.-xii.—Homeric *Hymns*—Æschylus, *Persæ* *Septem c. Thebas*—Demosthenes, *De Corona*—Aristotle, *Poetics*—[Longinus] *On the Sublime* (Vahlen's text).

Greek Prose Composition—Translation from Authors not prescribed.

Candidates may offer Verse Composition.

*Greek History.*—A general knowledge of Greek History to the death of Alexander, and a more minute knowledge of the development of the Athenian constitution (with special reference to Aristotle's *Constitution of Athens*).

*Greek Literature.*—A general knowledge of Greek Literature, and a more minute knowledge of the Authors prescribed.

*Greek Grammar.*—As a special subject, Monro's *Homeric Grammar* (the part relating to Homeric Syntax).

### *Optional Subjects.*

#### *I. Comparative Philology for 1902 and 1903.*

Candidates who take Comparative Philology as their optional subject for Graduation with Honours in Classics, will be examined in the following branches of Linguistic Science:—(a) Science of Language, including the history and general results of Linguistic research. (b) Principles of Indo-European Comparative Philology, with special reference to the Greek and Latin Languages. (c) Etymology of Greek and Latin.

Books recommended for private study:—(a) M. Müller, *Lectures on the Science of Language*. W. D. Whitney, *Language and the Study of Language*. B. Delbrück, *Introduction to the Study of Language*. (b) P. Giles, *Short Manual of Comparative Philology*.

Also recommended for reference:—King & Cookson, *Principles of Sound and Inflection*. Brugmann & Stolz, *Greek and Latin Grammar* (Iwan Müller's *Handbuch der Klassischen Alterthumswissenschaft*, vol. ii.). Blass, *Pronunciation of Ancient Greek* (Cambridge University Press). (c) Curtius, *Principles of Greek Etymology*, Book ii.

#### *Classical Archaeology for 1902 and 1903.*

1. The general history of the Arts of Form in Greece. To be studied in Overbeck's "*Schriftquellen*" and Murray's "*Handbook of Greek Archaeology*."

2. The history of Greek Sculpture. To be studied in E. Gardner's "*Handbook of Greek Sculpture*" and Brunn-Bruckmann's *Photographs*.

#### *Ancient Philosophy for 1902.*

The Pre-Socratic Philosophy, with original authorities as quoted in Ritter and Preller, *Historia Philosophiæ Græcæ*; The Sophists and Socrates; Plato, *Theætetus*, together with the outlines of the Platonic Philosophy.

Books recommended:—Zeller, *Pre-Socratic Philosophy*, vols. i. and ii. (Translation by Alleyne). Burnet, *Early Greek Philosophy*.

#### *Or, as an alternative:*

The Philosophy of Nature, Psychology and Ethics of Aristotle, with special reference to Aristotle, *Physics*, bks. i., ii.: *De Anima*, bk. i. ch. 1.; bk. ii. chs. 1-6, 12; bk. iii. chs. 1-5; *Nic. Ethics*, bks. i.-iv. and x.



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### Ancient Philosophy for 1903.

The Pre-Socratic Philosophy, with original authorities as quoted in Ritter and Preller, *Historia Philosophiæ Græcæ*; The Sophists and Socrates; Plato, *Phædo*, together with the outlines of the Platonic Philosophy.

Books recommended:—Zeller, *Pre-Socratic Philosophy*, vols. i. and ii. (Translation by Alleyne). Burnet, *Early Greek Philosophy*.

### Or, as an alternative:

The Philosophy of Nature, Psychology and Ethics of Aristotle, with special reference to Aristotle, *Physics*, bks. i., ii.: *De Anima*, bk. i. ch. 1; bk. ii. chs. 1-6, 12; bk. iii. chs. 1-5; *Nic. Ethics*, bks. i-iv. and x.

## II.—MENTAL PHILOSOPHY.<sup>1</sup>

### 1. Logic and Metaphysics for 1902 and 1903.

A competent knowledge of the History of Philosophy and of the more advanced doctrines of Logic and Psychology, and a special knowledge of the following books:—

Plato, *Sophist*—Aristotle, *Metaphysics*, bk. i.: and *De Anima*, bk. i. ch. 1; bk. ii. chs. 1-6, 12; bk. iii. chs. 1-5—Spinoza, *Ethics*—Hume, *Treatise on Human Nature*, Book i. (Of the Understanding)—Kant, *Critique of Pure Reason*—Hegel's *Logic*, in Professor Wallace's translation, chs. i.-vi.—Lotze's *Metaphysics*, bk. i. (Clarendon Press).

### 2. Moral Philosophy for 1902 and 1903.

A general knowledge of the history of ethical theory, and a more special knowledge of the following books:—

Plato, *Republic*—Aristotle, *Ethics*—Kant, *Theory of Ethics* (Abbott's trans.)—Hegel, *Philosophy of Right* (Dyde's trans.)—Sidgwick, *Methods of Ethics*—Green, *Prolegomena to Ethics*—Spencer, *Principles of Ethics*.

### 3. (In 1902 and subsequent years.) One of the following special subjects to be selected by the Candidate—

(a) Greek Philosophy. (b) Advanced Psychology. (c) Political Philosophy.

(a) Greek Philosophy for 1902 will include (1) a more detailed knowledge of the Greek books set in the general list; (2) Plato, *Philebus*; (3) Aristotle, *Posterior Analytics*.

(b) Advanced Psychology for 1902 (1) a more detailed knowledge of Ward's *Psychology*, and James' *Principles of Psychology*; (2) Stout's *Analytic Psychology*; (3) Külpe's *Outlines of Psychology*.

<sup>1</sup> The special examination in Greek (see p. 113) will be held at the same time as the first paper of the M.A. Pass Examination in Greek, in October 1901 and April 1902 and will consist of (1) Passages for translation from Aristotle, *Nic. Ethics*, bk. i.; Plato, *Republic*, bk. vi. or vii.; (2) Easy passages for unseen translation from Xenophon, Plato, or Aristotle. Candidates must enter their names, and state which book of Plato's *Republic* they offer, one month before the date of the examination.



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(c) Political Philosophy for 1902. Aristotle, *Politics*—Green, *Principles of Political Obligation*—Sidgwick, *Elements of Politics*.

### III.—MATHEMATICS AND NATURAL PHILOSOPHY.

Pure Geometry, Algebra, Theory of Equations, including Determinants, Trigonometry (Plane and Spherical), Analytical Geometry, Differential and Integral Calculus, Calculus of Finite Differences. (The Candidate may, if he please, profess the Elements of Quaternion Analysis.)

Experimental Physics; Analytical Dynamics and Thermodynamics; *imperative*.

In addition, two or more branches of Elementary Mathematical Physics (such as Geometrical or Physical Optics, Statical or Voltaic Electricity, Capillarity, &c.). These may be selected by the Candidate.

Students who select special subjects should consult the Examiners regarding the scope of their examination, and the text-books which they should use.

### IV.—ENGLISH (LANGUAGE, LITERATURE, AND BRITISH HISTORY).

1. Candidates for Honours in English must attend at least four complete courses of Lectures within their Honours group, viz.: (a) Not less than two Courses in English Literature, of which one at least must be an Honours Course; and (b) not less than two Courses—one of which at least must be an Honours Course—in the Subsidiary subjects, English Language and British History; or in either of them.

2. Every such candidate must be examined in all the three subjects mentioned in the Regulations, Section XI. (1) *f*.

#### *Subjects for 1902.*

##### 1. *Literature.*

1. Rhetoric and the Principles of Literature. The Professor's *History of Criticism*, vol. i., is recommended. Knowledge of the following required:—Aristotle's *Rhetoric* and *Poetics*; Quintilian's *Institutes*, especially books ix. and x.; Longinus, *On the Sublime*; Dante, *De Vulgari Eloquentia*; Jonson, *Discoveries*; Dryden, *Essay of Dramatic Poesy*; Johnson's *Lives of Cowley, Milton, Dryden, Pope, and Gray*; De Quincey's *Essay on Rhetoric*; Masson's *Essay on Milton's English and Versification* (in Edition of Milton); Guest's *English Rhythms*; Wordsworth's *Prose Prefaces*; Coleridge, *Biographia Literaria*, cap. xiv. to end; M. Arnold, *Essays in Criticism* (Preface and two first Essays, with Prefatory Essay to Ward's *Poets*).

2. History of English Literature. (1) *General*.—Books recommended:—Ten Brink's *Early English Literature* (transl. by Kennedy); Stopford Brooke's *Early English Literature*; Ward's *English Dramatic Literature*; Saintsbury's *Short History of English Literature, Elizabethan Literature* and *Nineteenth Century Literature*; Gosse's

*Eighteenth Century Literature* ; Ward's *English Poets* ; Craik's *English Prose* ; Irving's *History of Scottish Poetry*. (2) *Special*.—Literature of the Seventeenth Century. Candidates are expected to show a thorough knowledge of the following :—B. Jonson, *Alchemist*, *Sad Shepherd*, *Underwoods* ; Beaumont and Fletcher, *Philaster*, *Rule a Wife and Have a Wife* ; Massinger, *New Way to Pay Old Debts* ; Poems of Herrick, Marvell, Drummond ; Browne, *Urn Burial* and *Garden of Cyrus* ; Milton, *Minor Poems*, *Paradise Lost*, book i., *Areopagitica* and *Tractate of Education* ; Dryden, *Satires*, *Fables*, *Conquest of Granada*, *All for Love* ; Butler's *Hudibras*, part i. ; *Character Writers of the Seventeenth Century* (H. Morley).

3. The subjects of any other Honours Course in English Literature the Candidate may have attended.

Candidates will be required to write a Critical Essay on some subject arising out of Nos. 1, 2, or 3.

## 2. Language for 1902.

1. The History of Old and Middle English. For Books recommended for reference, see outline of Course on the History of Old and Middle English.

2. *Special Readings*.—*Beowulf* (ll. 1-1250) ; *The Seafarer* ; Selections from Ælfric's *Homilies* in Sweet's *A.-S. Reader* ; *The Owl and the Nightingale* ; Chaucer, *House of Fame* ; Rauf Coilyear ; Gavin Douglas, *Prologues to the Æneid* ; also Sweet, *A.-S. Reader*, part ii. (Archaic and Dialectal), and Morris and Skeat, *Specimens*, i. and ii., in illustration of O.E. and M.E. Dialects.

3. Unseen passages for translation into modern English.

## 3. British History.

Either (a) British History from B.C. 55 to A.D. 1837 in outline, and (b) British History, A.D. 1603-1714 in detail ; or, in the option of the Candidate (a) State and Church in England 1360-1563, and (b) Original sources relating to that period. The Examination will have special reference to Dr Lechler's *Wycliffe* ; Wycliffe's *de officio regis* ; the Vision of *Piers Plowman* ; Prologue to Chaucer's *Canterbury Tales* ; Fortescue's *Governance of England* ; and Seebohm's *Oxford Reformers*. For other books recommended, see Outline of Courses.

## Subjects for 1903.

### 1. Literature.

1. Rhetoric and the Principles of Literature. The Professor's *History of Criticism*, vol. i., is recommended. Knowledge of the following required :—Aristotle's *Rhetoric* and *Poetics* ; Quintilian's *Institutes*, especially books ix. and x. ; Longinus, *On the Sublime* ; Dante, *De Vulgari Eloquentia* ; Jonson, *Discoveries* ; Dryden, *Essay of Dramatic Poesy* ; Addison, *Essays on Paradise Lost* and *The Pleasures of the Imagination* ; Pope, *Essay on Criticism* ; Johnson, *Lives of Cowley*, *Milton*, *Dryden*, *Pope*, and *Gray* ; Wordsworth's *Prose Prefaces* ;

Coleridge, *Biographia Literaria*, cap. xiv. to end ; M. Arnold, *Essays in Criticism* (Preface and two first Essays, with Prefatory Essay to Ward's *Poets*) ; Masson's *Essay on Milton's English and Versification* (in Edition of Milton) ; Guest's *English Rhythms*.

2. History of English Literature. (1) *General*.—*Books recommended*:—Ten Brink's *Early English Literature* (transl. by Kennedy) ; Stopford Brooke's *Early English Literature* ; Ward's *English Dramatic Literature* ; Saintsbury's *Short History of English Literature, Elizabethan Literature and Nineteenth Century Literature* ; Gosse's *Eighteenth Century Literature* ; Ward's *English Poets* ; Craik's *English Prose* ; Irving's *History of Scottish Poetry*. (2) *Special*.—Literature of the Eighteenth Century. Candidates are expected to show thorough knowledge of the following:—Addison ; Arnold's *Selections* : Pope, *Essay on Man, Satires and Epistles* ; Swift, *Tale of a Tub, Battle of the Books, Gulliver's Travels* ; Thomson, *Seasons and Castle of Indolence* ; Johnson, Gray, Collins, Goldsmith, Fergusson, Burns, *Poems* ; A. Ramsay, *The Gentle Shepherd* ; Cowper, *The Task* ; Crabbe, *The Village* ; Burke, *Reflections on the Revolution in France*.

3. As above.

## 2. Language.

1. The History of Old and Middle English. For Books recommended for reference see Course on the History of Old and Middle English.

2. *Special Readings*.—*Beowulf* (ll. 1251-1887) ; The Verse passages in the *Chronicle* ; Ælfric, *Homilies* (Extracts in Sweet's *A.-S. Reader*) ; Havelok, *The Brus* (bks. i.-iii. inclus.) ; Chaucer, *The Book of the Duchesse* ; Henryson, *Fables*. Also Sweet, *A.-S. Reader*, part ii. (Archaic and Dialectal), and Morris and Skeat, *Specimens*, i. and ii., in illustration of O.E. and M.E. Dialects.

3. Unseen passages for translation into Modern English.

## 3. British History.

Either (a) British History from B.C. 55 to A.D. 1837 in outline, and (b) British History, A.D. 1603-1714 in detail ; or, in the option of the Candidate (a) State and Church in England 1360-1563, and (b) Original sources relating to that period. The Examination will have special reference to Dr Lechler's Wycliffe ; Wycliffe's *de officio regis* ; the Vision of *Piers Plowman* ; Prologue to Chaucer's *Canterbury Tales* ; Fortescue's *Governance of England* ; and Seebohm's *Oxford Reformers*. For other books recommended, see Outline of Courses.

## V.—MODERN LANGUAGES AND LITERATURE.

### French, 1902.

Chanson de Roland—Darmesteter, 16<sup>me</sup> Siècle—Montaigne, *Essais*—Pascal, *Pensées*—Saint-Simon, *Mémoires (Extraits)*—Rousseau, *Confessions, Contrat Social*—V. Hugo, *Année Terrible, Légende des Siècles, Extraits en Prose* (Delagrave), *Chefs-d'œuvre dramatiques*—

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Faguet, *Politiques et Moralistes* — Taine, *Notes sur l'Angleterre* — Saint-Victor, *Hommes et Dieux*.

*French Composition* and translation of unseen passages.

Oral examination: reading aloud, and French conversation. Subject: Victor Hugo, *Légende des Siècles*.

*French History*.—A general knowledge of French History, and a more minute knowledge of the period from 1789 to 1870. Books recommended:—Michelet, *Révolution française*—Taine, *Origines de la France contemporaine*—Thiers, *Consulat et Empire*.

*French Literature*.—A general knowledge of the history of French Literature, and a special knowledge of the period from 1802 to 1889.

*Romance Philology*.—The general principles of Romance Philology. Books recommended:—Brachet, *Grammaire historique*; Bartsch, *La Littérature française jusqu'au 14<sup>me</sup> siècle*; Brunot, *Grammaire historique*, 3rd ed.; Darmesteter, *Grammaire historique*.

*French, 1903.*

Chanson de Roland—Darmesteter, 16<sup>e</sup> *Siècle*—Montaigne, *Essais*—Pascal, *Pensées* — La Bruyère, *Caractères* — Saint-Simon, *Mémoires (Extraits)* — Rousseau, *Emile, Petits Chefs-d'œuvre* — Montesquieu, *Esprit des Lois*—Victor Hugo, *Chefs-d'œuvre dramatiques*—Lamartine, *Lectures pour Tous*—Faguet, *Dix-huitième Siècle*—Taine, *Littérature anglaise*—de Staël, *l'Allemagne*—*Annales Politiques et littéraires*, 1902-3.

*Composition and History* as for 1902.

Oral examination: reading aloud, and French conversation. Subject: Victor Hugo, *Légende des Siècles*.

*French Literature*.—A general knowledge of the history of French Literature, and a special knowledge of the period from 1802 to 1889.

*Romance Philology*.—The general principles of Romance Philology. Books recommended:—Brachet, *Grammaire historique*; Bartsch, *La Littérature française jusqu'au 14<sup>me</sup> Siècle*; Brunot, *Grammaire historique*, 3rd ed.; Darmesteter, *Grammaire historique*.

*German for 1902.*

*Gotische Sprachdenkmäler*, ed. Jantzen (Götschen)—*Althochdeutsche Litteratur*, ed. Schaufler (Götschen)—*Der Nibelunge Not*, Avent. xvi.-xxx., ed. Bartsch—R. Meyer, *Einführung in das ältere Neuhochedeutsche* (Reisland)—Luther, *Vermischte Schriften*, ed. Neubauer (Halle, Waisenhaus)—*Die Litteratur des XVII. Jahrhunderts*, ed. Bötticher—Klopstock, *Oden, Auswahl*, ed. Lichtenheld (Gräser)—Winckelmann, *Musterstücke*, ed. Kühne (Weidmann)—K. Fischer, *Lessing's Nathan der Weise*—Herder, *Prose* (Velhagen Bd. ii.)—Goethe, *Tasso*, ed. Thomas (Heath)—Goethe, *Dichtung und Wahrheit*, Buch vii.-xiii.—Schiller, *Gedichte der III. Periode*—Schiller *Briefe über die aesthetische Erziehung*—Heine, *Die Harzreise*—Stifter, *Die Narrenburg*—Geibel, *Heroldsrufe*—Storm, *Hans Kirch und Heinz Kirch*—Reuter, *Läuschen und Rimels* (Extracts).

## 146 *Graduation in Arts—Honours Subjects for 1902-1903.*

Translation from authors not prescribed. German Prose composition. German Essay.

Oral examination in reading aloud and in German conversation. Subjects: Goethe's *Dichtung und Wahrheit* and Tasso.

Recommended:—Viotor, *Die Aussprache des Schriftdeutschen*.

*German History*.—A general knowledge of the subject, and a more minute knowledge of the period from 1700 to 1900.

Recommended:—D. Müller, *Leitfaden der deutschen Geschichte*—Kaemmel, *Der Werdegang des deutschen Volkes*—Günther, *Deutsche Kulturgeschichte*.

*German Literature*.—A general knowledge of the subject, and a more special knowledge of the authors prescribed, and of the period from 1740 to 1900.

Recommended:—M. Koch, *Deutsche Litteraturgeschichte* (Göschen)—W. Scherer, *Deutsche Litteraturgeschichte*.

*German Philology*.—Elements of Historical Grammar as contained Brandt's *German Grammar* (Boston, Allyn & Bacon).

Recommended:—O. Weise, *Unsere Muttersprache*—Behagel, *Die deutsche Sprache*.

For Books read in the Classes and for short Courses see outline of Courses.

### *German for 1903.*

*Althochdeutsche Litteratur*, ed. Schauffler (Göschen)—*Deutsche Mythologie*, Kauffmann (Göschen)—*Quellenbüchlein zur Kulturgeschichte des Deutschen Mittelalters*, Schauffler—Meier Helmbrecht, Wernher der Gärtner—Luther, *An den christlichen Adel deutscher Nation*. Niemeyer (Neudrucke)—*Simplicissimus*, Grimmelshausen) ed. G. Klee (Velhagen)—Voss, *Homers Ilias*, ed. Primozi (Graeser, —Schiller, *Wallensteins Tod*, ed. Breul (Pitt Press)—Goethe, Werthers Leiden—*Correspondence between Schiller and Goethe*, ed. J. G. Robertson (Ginn & Co.)—Lenau, *Gedichte*—Geibel, *Letzte Gedichte*—G. Freytag, *Aus dem Jahrhundert der Reformation* (Bilder aus der deutschen Vergangenheit)—Scheffel, *Ekkehard*—Storm, *Aquis submersus*—R. Hildebrand, *Tagebuchblätter eines Sonntagsphilosophen*—Reuter, *Ut mine Stromtid*, Bd. i.

Translation from authors not prescribed. German Prose composition. German Essay.

Oral examination in reading aloud and in German conversation. Subjects: Wallenstein, Werther, Correspondence.

Recommended:—Viotor, *Die Aussprache des Schriftdeutschen*.

*German History*.—A general knowledge of the subject, and a more minute knowledge of the period from 1700 to 1900.

Recommended:—D. Müller, *Leitfaden der deutschen Geschichte*—Kaemmel, *der Werdegang des deutschen Volkes*—Günther, *Deutsche Kulturgeschichte*

*German Literature*.—A general knowledge of the subject, and a more special knowledge of the authors prescribed, and of the period from 1740 to 1900.



Recommended :—M. Koch, *Deutsche Litteraturgeschichte* (Göschel)  
—W. Scherer, *Deutsche Litteraturgeschichte*.

*German Philology*.—Elements of Historical Grammar as contained  
in Brandt's *German Grammar* (Boston, Allyn & Bacon).

Recommended :—O. Weise, *Unsere Muttersprache*—Behagel, *Die deutsche Sprache*.

For Books read in the classes and for short courses see outline of  
courses.

## VI.—HISTORY.

Candidates for Honours in History must attend two Classes (one at  
least of which must be an Honours Class) in each of their Honours  
Subjects.

The Honours Subjects at present recognised are (1) Modern History,  
(2) Constitutional History, and (3) History of Art. See outlines of  
Courses,

I. Under the head of *Modern History* four papers will be set :—

### *Subjects for 1902.*

(1) "General Survey of British History from B.C. 55 to A.D. 1837,  
with special attention to the period A.D. 1603-1689." Candidates  
will be required to show a knowledge of Gardiner's *Documents of the  
Puritan Revolution*.

(2) *Either* (a) "The History of Europe from 1610 to 1715," with a  
special study of the following books :—Fontenay-Mareuil, *Mémoires* ;  
Cardinal de Retz, *Mémoires* ; Torcy, *Mémoires* ; or, (b) "The History  
of France from 1715 to 1815, with special attention to the period of the  
French Revolution from 1789-95." Prescribed books :—Arthur Young,  
*Travels in France* ; Bailly, *Mémoires*, tome i. ; Bertrand-Moleville,  
*Mémoires Particuliers* ; Schmidt, *Tableaux de la Révolution française*,  
tome i. ; Morse-Stephens, *Orators of the French Revolution*. For other  
recommendations, see outline of Courses.

### *Subjects for 1903.*

(1) "General Survey of British History from B.C. 55 to A.D. 1837,  
with special attention to the period A.D. 1603 to 1689." Candidates  
will be required to show a knowledge of Gardiner's *Documents of the  
Puritan Revolution*.

(2) *Either* (a) "The History of France from 1715-1815, with special  
attention to period of the French Revolution from 1789-95." Prescribed  
books :—Arthur Young, *Travels in France* ; Bailly, *Mémoires*, tome i. ;  
Bertrand-Moleville, *Mémoires Particuliers* ; Schmidt, *Tableaux de la  
Révolution française*, tome i. ; Morse-Stephens, *Orators of the French  
Revolution* ; or, (b) "The History of Europe from 1715 to 1815, with  
a special study of *The Diaries and Correspondence of the first Earl of  
Malmesbury*," vols. i.-iii. For recommended books, see Outline of  
Courses.

II. In *Constitutional History*, four papers :—



## 148 *Graduation in Arts—Honours Subjects for 1902-1903.*

### *Subjects for 1902 and 1903.*

(1) and (2) Constitutional History of England (a) from 1066 to 1450; (b) from 1688 to 1782.

(3) Origins and Principles of the chief European Constitutions.

(4) State and Church in England, from Wycliffe to Luther.

The Candidate must show some familiarity with the original sources in Latin, French, Old English, &c. ; cf. Syllabus of Course.

### III. In *History of Art* four papers :—

#### *Subjects for 1902 and 1903.*

(1) The general subject (two papers) embracing :—The Class Lectures ; the Professor's Manual "The Fine Arts" ; Conway's "Dawn of Art in the Ancient World" ; Maspero's "Dawn of Civilization" and "The Struggle of the Nations" ; Woltmann's "History of Painting," vol. i. ; Vasari's "Lives" of Giotto, Angelico, Donatello, Brunelleschi, Michelangelo (in Blashfield and Hopkins' edition of the "Lives," or in Bohn's translation, with the addition of Richter's Notes in vol. vi. of Bohn's edition).

(2) Classical Archæology (two papers). The examination will be in the same books, &c., as those prescribed in this subject in 1902 and 1903 for Honours in Classics. (See p. 140.)

(3) In 1902 British History as illustrated in monuments, &c. (two papers). *Text-books*—Bede, *Opera Historica*, ed. Plummer (selected passages) ; J. Romilly Allen, *Monumental History of the Early British Church*.

### VII.—ECONOMIC SCIENCE.

(i.e. POLITICAL ECONOMY with either (a) MORAL PHILOSOPHY or (b) HISTORY as supplementary Honours Subject.

#### *Subjects for 1902 and 1903.*

I. POLITICAL ECONOMY.—An advanced knowledge of Economic Theory. Special knowledge of the Economic Functions of Government and Public Finance. General Economic History of England, and special study of set subjects.

*Books recommended* :—General Theory.—Marshall's *Principles of Economics*, Vol. I. ; Keynes' *Scope and Method of Political Economy* ; Nicholson's *Principles of Political Economy*. For Reference on Abstract Methods—*Pantaleoni's Pure Economics*.

Government and Finance.—Adam Smith's *Wealth of Nations*, Book V. ; J. S. Mill's *Political Economy*, Book V. ; Sidgwick's *Political Economy*, Book III. ; Bastable's *Public Finance*. For Reference—Sidgwick's *Elements of Politics*, chaps. i.-xii.

Economic History.—Cunningham's *Growth of English Industry and Commerce* ; Seebohm's *English Village Community*, chaps. i.-v. For Reference—Roger's *Six Centuries of English Work and Wages* ;

Ashley's *Economic History*; Gomme's *Village Community*; Vinogradoff's *Villeinage in England*.

Three Papers to be set.

2. MORAL PHILOSOPHY.—The papers in Moral Philosophy will be the same as those set for Honours in Philosophy.

3. HISTORY.—The papers in History, either General or Constitutional (in the Candidate's option) will be the same as for Honours in History.

## REGULATIONS FOR SCHOOLMASTER'S DIPLOMA.

1. Candidates for the Schoolmaster's Diploma must be graduates in Arts of a Scottish, English, or Irish University, or of some other University approved of by the Senatus and the University Court.

2. Each Candidate must have matriculated in the University for the year in which he presents himself for the Diploma.

3. Each Candidate must have attended the Class of the Theory, Art, and History of Education in the University.

4. Each Candidate must pass an Examination in the Theory, Art, and History of Education, to be conducted by the Professor of that subject, and an Examiner appointed by the University Court.

5. The subjects of Examination are announced annually.

6. Each Candidate must give evidence either—

(a) That he has attended a Course of Practical Instruction as a Queen's Scholar in a Training College for Teachers; *or*,

(b) That he has gone through a complete course of Practical training in a Training College for Teachers—the Course to extend over not less than five months (eight hours weekly), and to include Demonstration and Criticism Lessons.

N.B.—*Those desirous of obtaining the Secondary School Diploma will further be required to spend a month in a Secondary School.*<sup>1</sup>

*or,*

(c) That she has completed a Practical Course in St George's Training College, Edinburgh, and passed the practical examination of the University of Cambridge Syndicate.

7. Each Candidate must further satisfy the University of his practical aptitude as a Teacher by teaching a class in some special Subject or Subjects in which he has received instruction in the University, or in any Institution recognised by the University as qualifying for Degrees.

8. Each successful Candidate will receive a Diploma signed by the Vice-

<sup>1</sup> The Heriot Governors, the Merchant Company, and the School Board of Edinburgh, have thrown open their Secondary Schools to students preparing for the Diploma.

Chancellor of the University, or, in his absence, by the Principal or the Senior Professor. This Diploma is of two grades: (a) *Secondary School Diploma*, for Masters of Arts with Honours in any Department, testifying to their fitness for Secondary Schoolmasterships, and will state the Special Subjects in which the holder of the Diploma is qualified. When a Candidate requires special mention made of his competency to teach French or German, he is required to pass a practical examination in French or German pronunciation and conversation; (b) *General Diploma*, for those who have taken the ordinary Degree of M.A. This is recognised by the Scottish and English Education Departments as qualifying (in the case of Graduates of the University of Edinburgh) for employment in Public Schools.

9. The Fee for the Diploma is £2, 2s.

The Examinations begin on Wednesday, 16th October 1901, and on Friday, 28th March 1902, at 9 A.M., and Candidates are required to enter their names and pay the Fees at the *Matriculation Office* on or before 3rd October and 3rd March.

The subjects of Examination are the same as for Graduation in Education (which see, page 134), but the Standard of Pass is much higher, *with the addition* of Milton's "Tractate"; Quintilian's "Institutions," Books I. and II.; and "The History of Education, Hellenic and Roman," as in the "Historical Survey of Pre-Christian Education," by the Professor; also the General Outlines of History, as in Quick's "Biographies," from 1750 A.D.

*A short Thesis will be prescribed to be written in the Examination Room on an Educational subject.*

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## EXAMINATION FOR CANDIDATES FOR THE ARMY.

1. Graduates in Arts or in Science of this University, or anyone who has passed the Examinations for either of these degrees are eligible for Commissions in the Army. The limit of age is 17 to 23.

2. Students of this University who have passed "the Examination of Candidates for the Army," are also eligible for Commissions. They are required to attend one class in each of the following three Departments—viz. (a) Latin or Greek; (b) Logic or Moral Philosophy, or Rhetoric and English Literature; (c) Mathematics or Natural Philosophy,—and to pass the Examination on the M.A. standard, in the three subjects in which they have attended classes. The limit of age in this case is 17 to 22.

Candidates for Certificates must enter their names in and pay the Fees at the *Matriculation Office* at the same time as the Candidates for the M.A. Examinations. The Fee for the Examination is two guineas.

# Competitive Examinations for Bursaries in Arts.

## HONOURS LIST.

### ORDERS OF MERIT.

October 1900.

### I.—STUDENTS ENTERING FIRST SESSION.

#### A. GENERAL BURSARY LIST.

(*Subjects of Examination*—English, Latin, Greek, Mathematics, French, German, Italian, and Dynamics (with additional papers in English, Latin, Greek, Mathematics, French, and German). Candidates select not more than five subjects. Those who select Latin, Greek, or Mathematics take the papers on these subjects on the Higher Standard.

- |   |   |
|---|---|
| 1. John C. H. Macnair, George Watson's College.         | 16. James W. S. Davidson, Royal High School.            |
| 2. Alexander F. Giles, George Watson's College.         | 17. Andrew Downie, Dollar Institution.                  |
| 3. Thomas B. Johnston, George Watson's College.         | 18. William C. O. Barrie, George Watson's College.      |
| 4. Frederick M. Philip, George Watson's College.        | 19. George W. Scarth, Kirkwall Burgh School.            |
| 5. James Gunn, George Watson's College.                 | 20. William P. Ferguson, George Watson's College.       |
| 6. John Jackson, Ayr Academy.                           | 21. Samuel Hunter, Royal High School.                   |
| 7. John B. Alexander, George Watson's College.          | 22. Charles P. Grant, George Watson's College.          |
| 8. Lennox F. Robertson, George Watson's College.        | 23. James Munro, Daniel Stewart's College.              |
| 9. { Alexander Robertson, George Watson's College.      | 24. James L. M'Callum, Carlisle Grammar School.         |
| { Maxwell MacLagan Wedderburn, George Watson's College. | 25. Peter G. Brown, Royal High School.                  |
| 10. Archibald King, George Watson's College.            | 26. Annie R. Murray, Ayr Academy.                       |
| 11. John C. Mackenzie, Daniel Stewart's College.        | 27. David Henderson, Robert Gordon's College, Aberdeen. |
| 12. Gilbert Watson, Royal High School.                  | 28. John Morrison, Tranent Public School.               |
| 13. Alasdair D. A. MacGregor, George Watson's College.  | 29. Mackenzie Douglas, George Watson's College.         |
| 14. { James M'Caig, Wallace Hall Academy.               | 30. { William R. Cunningham, George Watson's College.   |
| { Alexander J. Merriles, North Berwick High School.     | { John Kellie, Kilmarnock Academy.                      |
| 15. Robert T. Monteith, Perth Academy.                  | 31. Henry H. Craw, George Watson's College.             |
|   | 32. James G. Mitchell, Royal High School.               |

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|---|---|
| 33. Donald Stewart, Inverness Royal Academy.          | 39. Benjamin B. Bruce, Miller Institution, Thurso.  |
| 34. { William Allan, Daniel Stewart's College.        | 40. { James Forgie, Ayr Academy.                    |
| 34. { Andrew H. Cuthbert, Royal High School.          | 40. { Thomas R. Gardiner, Royal High School.        |
| 35. Hubert W. Strathairn, Morrison's Academy, Crieff. | 41. { George B. Macgregor, George Watson's College. |
| 36. Stephen Forrest, George Watson's College.         | 42. Robert C. Johnstone, Daniel Stewart's College.  |
| 37. William S. Millar, Leith Academy.                 | 43. John H. Robertson, Royal High School.           |
| 38. { Thomas T. Alexander, George Watson's College.   | 44. Craigie M. Aitchison, High School, Falkirk.     |
| 38. { Andrew F. Anderson, Falkirk High School.        | 45. John B. Marshall, Perth Academy.                |

**B. JOHN WELSH CLASSICAL BURSARY.***(Subjects of Examination—English, Latin, and Greek.)*

- |   |   |
|---|---|
| 1. Alexander F. Giles, George Watson's College.           | 13. William C. O. Barrie, George Watson's College.        |
| 2. John C. H. Macnair, George Watson's College.           | 13. { John B. Alexander, George Watson's College.         |
| 3. James L. McCallum, Carlisle Grammar School.            | 14. { Andrew Downie, Dollar Institution.                  |
| 4. Thomas B. Johnston, George Watson's College.           | 14. { James Gunn, George Watson's College.                |
| 5. { John C. McKenzie, Daniel Stewart's College.          | 15. { David Henderson, Robert Gordon's College, Aberdeen. |
| 5. { Alexander Robertson, George Watson's College.        | 15. { James McCaig, Wallace Hall Academy.                 |
| 6. { John Jackson, Ayr Academy.                           | 16. James Munro, Daniel Stewart's College.                |
| 6. { Frederick M. Philip, George Watson's College.        | 17. Craigie M. Aitchison, High School, Falkirk.           |
| 7. Lennox F. Robertson, George Watson's College.          | 18. Charles P. Grant, George Watson's College.            |
| 8. Alasdair D. A. MacGregor, George Watson's College.     | 19. George W. Scarth, Kirkwall Burgh School.              |
| 9. Gilbert Watson, Royal High School.                     | 20. James Forgie, Ayr Academy.                            |
| 10. Maxwell MacLagan Wedderburn, George Watson's College. | 21. Robert T. Monteith, Perth Academy.                    |
| 11. Samuel Hunter, Royal High School.                     | 22. Mackenzie Douglas, George Watson's College.           |
| 12. { James W. S. Davidson, Royal High School.            | 23. Peter G. Brown, Royal High School.                    |
| 12. { William P. Ferguson, George Watson's College.       |   |

**C. JOHN WELSH MATHEMATICAL BURSARY.***(Subjects of Examination—Mathematics, especially pure Geometry.)*

1. Alexander J. Merriles, North Berwick High School.
2. John C. H. Macnair, George Watson's College.
3. { John B. Alexander, George Watson's College.
3. { Archibald King, George Watson's College.
4. James Gunn, George Watson's College.
5. Frederick M. Philip, George Watson's College.

**D. GEORGE HERIOT BURSARIES FOR WOMEN (ARTS) AND BURSARIES OF EDINBURGH ASSOCIATION FOR THE UNIVERSITY EDUCATION OF WOMEN.**

*(Subjects as for General Bursary Competition.)*

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|--|--|
| 1. Jeannie B. Thomson, Perth Academy.                                      | 6. Jessie B. T. Weir, Edinburgh F.C. Normal School.    |
| 2. Annie R. Murray, Ayr Academy.   | 7. Harriet Cowe, George Watson's Ladies' College.      |
| 3. Jane Crow, Montrose Academy.  | 8. Grace M. Pears, Edinburgh Ladies' College.          |
| 4. Isabella M. Towers, St George's Classes, and Edinburgh Ladies' College. | 9. Isobel M. Nelson, Edinburgh Ladies' College.        |
| 5. Marion H. Archibald, Hamilton Academy.                                  | 10. Agnes R. Cameron, George Watson's Ladies' College. |

**E. GEORGE HERIOT BURSARIES FOR WOMEN (MEDICINE)**

*(Subjects of Examination—The Preliminary Examination for Arts or Science.)*

Janet M. Murray, Ayr Academy and Edinburgh University.  
Davidina R. J. Davidson, George Watson's Ladies' College.

**F. RENTON BURSARY.**

*(Subjects of Examination—English and Mathematics.)*  
Archibald King.

**G. MACKINNON BURSARY.**

*(Subjects of Examination—As for Preferential Bursaries, with Gaelic in addition.)*

Alexander Mackay. | Alexander Sutherland.

**H. KELLAND PRIZE.**

*(Subject of Examination—Geometry.)*  
J. Alexander Merriles.

**I.—SECOND YEAR BURSARIES.**

*(Subjects of Examination—Latin, Greek, and Mathematics.)*  
George Robertson.

**II.—THIRD YEAR BURSARIES.**

*(Subjects of Examination—Classics, Mathematics, and Logic with Psychology.)*

W. Booth-Gravely. | Alexander Gray.

**GRADUATES IN ARTS.**

**HIGHER DEGREES.**

1897.

DOCTOR OF LETTERS (D.LITT.).

Alexander Douglas Thomson, M.A. (Edin.).



1897.

DOCTOR OF PHILOSOPHY (D. PHIL.).

John Davidson, M.A. (Edin.).

Robert Latta, M.A. (Edin.).

Hugh Ross Mackintosh, M.A. (Edin.).

Patrick Johnston MacLagan, M.A. (Edin.).

1899.

James Black Baillie, M.A.

1900.

John Smyth, M.A. (N.Z.).

SPONSIO ACADEMICA FOR M.A.

Nos qui Nomina subsignamus Magisterii titulo jamjam donandi Spondemus nos in omni debitae gratitudinis officio erga Universitatem Academicam Edinburgensem ad extremum vitae halitum perseveraturos.

DEGREE OF M.A. WITH HONOURS—1889-1901 *inclusively*.

The names of all Graduates in Arts with Honours previously to 1889 will be found in the List of Graduates of the University published in 1889.

*The contractions Class., Phil., Math., Engl., Mod. Lang., and Nat. Sc., indicate the Departments or Groups of Classics, Mental Philosophy, Mathematics and Natural Philosophy, English, Modern Languages, and Natural Science, respectively; and the Italic Numerals, i., ii., and iii. indicate First, Second, and Third Class Honours respectively.*

1889.

*Class. i.*, Patrick Duncan, Harry Angus Alexander Kennedy, Thomas Ross Mills, Jas. Cruickshank Smith, John Tennant.

*Class. ii.*, Robert Alex. Falconer, Alexander Harris Hutt.

*Phil. i.*, Charles Mackinnon Douglas, William George Smith.

*Phil. ii.*, David Walton Vaughan.

*Math. i.*, James Ireland Craig, William Andrew Knowles, Jas. Fairbairn M'Kean.

*Nat. Sc.*, Alexander Bremner, John Brown Clark, David Davidson, John Melvin Lowson, Robert Stewart M'Dougall, John Machray, John Hally Meikle, Harry Fisher Menzies, Alexander Gordon Wallace, John Young.

1890.

*Class. i.*, John MacLennan, James Watt.

*Class. ii.*, William Brereton Denison, William Barron Stevenson.

*Phil. i.*, Andrew Nisbet Bogle, Duncan Mackenzie, Thomas Dixon Rutherford, James Stewart.

*Phil. ii.*, Henry Reynolds Brown, William Elmslie Wilkie Brown Dempster, Arthur Herbert Gray, Walter Hardie.

*Math. i.*, Charles Tweedie.

*Nat. Sc.*, James Adamson, William Lewis Martin, John Myles, Andrew Robertson Wilson.

1891.

- Class. ii.*, John Adam Norrie,  
William Gibson Wedderspoon.  
*Phil. i.*, Henry Barker, John  
Davidson, Walter Chas. Murray.  
*Phil. ii.*, Alexander Grieve, Wm.  
Allan Neilson, Alexander Joseph  
Pearse.  
*Math. i.*, John Forbes, Adam  
Mitchell Hunter, William Ed-  
ward Philip, William Leslie  
Thomson, John Turner.  
*Nat. Sc.*, Robert Pollok, James  
Rodger Watson.

1892.

- Class. ii.*, Peter Campbell, William  
Gracie, Hugh Ross Mackin-  
tosh.  
*Phil. i.*, Hugh Ross Mackintosh.  
*Phil. ii.*, Thomas Linton, William  
Joseph Pennell.  
*Math. i.*, James Mitchell.  
*Math. ii.*, Alexander Campbell  
Mackay.  
*Nat. Sc.*, John Smith Flett.

1893.

- Class. i.*, Robert Gordon McKer-  
ron.  
*Class. ii.*, Walter Robertson Hen-  
derson, Hugh Lugton Jackson,  
Robert Montgomerie Samson.  
*Phil. i.*, Alexander Beith Mac-  
aulay, Hugh Pattison Macmil-  
lan, Lillias Maitland.  
*Phil. ii.*, William John Collier,  
Sydney Smith, William Finlay-  
son Trotter.  
*Math. i.*, Neil Macmichael.  
*Math. ii.*, George Lowe Moffat,  
Frank Spence, Thomas Wilkie  
Wilson, James Wood.  
*Nat. Sc.*, Frank Spence, William  
White Taylor, William Watson.

1894.

- Class. i.*, George Liddell, James  
Middleton Moore, Robt. Lindsay  
Ross.  
*Phil. i.*, James Black Baillie.  
*Math. i.*, Alexander George Bur-  
gess, John Watt Butters, Henry  
Herd, John Alexander Jonhston.  
*Math. ii.*, Thomas Cleghorn  
Baillie.  
*Nat. Sc.*, John Watt Butters.

1895.

- Class. i.*, Francis Dewar, William  
John Keith, Alexander Buchanan  
Macdonald, William Wallace  
M'Kechie, Alfred Croom  
Paterson, William David Ross.  
*Class. ii.*, George Duncan Low,  
Peter M'Gregor, James Mac-  
Kenna, Charles Cunningham  
Watson.  
*Phil. i.*, John Macaskill.  
*Phil. ii.*, James Bonnar Russell,  
Robert Whyte.  
*Math. i.*, John Forbes Cameron,  
Hugh Archibald Jamieson,  
James Alexander Macdonald,  
Thomas William Pickles.  
*Math. ii.*, Robert Candlish Melville  
Bell.  
*Engl. i.*, David Nichol Smith.

1896.

- Class. i.*, Charles Samuel Edgar,  
Alexander Macgregor, Jessie  
Thomson Muir.  
*Class. ii.*, Marshall Newton Goold  
Gray, Tom Bell Maxwell Lamb,  
William Robb.  
*Math. and Nat. Phil. i.*, William  
Jeffrey, Malcolm Caird M'Alpin,  
Andrew Cameron Smith, Frank  
Guthrie Smith.  
*Math. and Nat. Phil. ii.*, John  
Smith Begg, Leopold Octavius  
Critchley.

*Engl. i.*, George Douglas Shepherd.

*Engl. ii.*, Emily Moir Milligan.

*Engl. iii.*, Louisa Reid Boyd.

1897.

*Class i.*, Sidney George Campbell, William Alexander Curtis, Arthur Berriedale Keith, Donald Allan Macnaughton, Thomas Stewart Macpherson, William Cuthbert Morton.

*Class. ii.*, David William Inglis, Ethelwyn Lemon, William Mackenzie, George Robert Thomson Ross.

*Class. iii.*, Marcus Dods.

*Phil. i.*, Charles Macfie Campbell, Bruce M'Ewen, Frances Helen Melville, George Claus Rankin, George Robert Thomson Ross.

*Phil. ii.*, Alfred George Hogg.

*Math. and Nat. Phil. i.*, Richard Bell, Alexander Brown, James Chalmers Leighton.

*Math. and Nat. Phil. ii.*, David Macrae Aitken, George Ednie, William David Proudfoot.

*Engl. i.*, George Dundas Craig.

*Hist. i.*, John M'Farlane.

1898.

*Class. i.*, Victor Caldwell, William Dunbar, John Lees, Bernard Herrmann Richardson, James Stirling Ross.

*Class. ii.*, Alexander Flint, David Lindsay Norrie.

*Class. iii.*, Rosa Gertrude Caroline Stoltz.

*Phil. i.*, Archibald Scott Ballantyne, Alexander Darroch, John Adam Gray, David Hutchison Macgregor, Alexander Mair, Aeneas Rose.

*Math. and Nat. Phil. i.*, Ernest Masson Anderson, B.Sc., James Mitchell Low, John Brochie Meiklejohn, Hugh Mitchell, James Thomas Young, B.Sc.

*Math. and Nat. Phil. ii.*, Henry Alfred Braine, Patrick Sinclair Hardie, James Lornie.

*Math. and Nat. Phil. iii.*, Donald Banks, William Thomson.

*Eng. ii.*, Charles Henry Moore, William Porter.

*Mod. Lang. i.*, George Brown, James Melville.

*Mod. Lang. ii.*, Jessie Annie M'Kechnie.

*Hist. ii.*, Bessie Brown Bird, Alexander Barrie Robb.

1899.

*Class. i.*, James Young Bell, James Crerar, Augusta Murray Campbell Davidson, Charles Gordon Mackay.

*Class. ii.*, Donald James Boyd, Joseph Hardie Cattnach, Kenneth Neville Knox, Henry Crawford Liddell, Herbert Smiles, Ralph Alex. Wilson.

*Phil. i.*, Thomas Miller Forsyth, Liliás Amélie Geraldine Fraser, John Mackintosh Shaw.

*Phil. ii.*, George Wedderspoon.

*Math. and Nat. Phil. i.*, Robert Duncan Bell, David Drysdale, James Macdonald Dunnett, Archibald Milne, Samuel Findlater Stewart.

*Math. and Nat. Phil. ii.*, George Aimer Russell, Henry Wilkie.

*Math. and Nat. Phil. iii.*, Alexander Waddell.

*Eng. i.*, Thomas Paterson.

*Eng. ii.*, William Geddie, Charles Frederick Grant.

*Mod. Lang. i.*, Bessie Hunter Auld Robson.

1900.

*Class. i.*, James Bryce Jamieson, Kenneth MacIennan, William David Russell Prentice, William Rennie, Isabella Watt Stevenson.

*Class. ii.*, Thomas Davidson, George Victor Dunnett, Francis John Gordon, Harry Campbell Norman, Douglas Galton Robertson, Alexander Thomson, Roderick Barron.

*Phil. i.*, Alexander Mackie.

*Phil. ii.*, Edith Sophia Hooper, Jessie Chrystal Macmillan, B.Sc.

*Math. and Nat. Phil. i.*, Jessie Chrystal Macmillan, B.Sc.

*Math. and Nat. Phil. ii.*, Edward Blades, David Moncrieff Johnstone.

*Math. and Nat. Phil. iii.*, Robert Norrie.

*Eng. i.*, Edith Sophia Hooper, John Purves.

*Eng. ii.*, John MacRae, Richard Hunter Moar.

*Mod. Lang. i.*, Jessie Lees, Johanne Frederikke Thomsen, Mary Tweedie.

*Mod. Lang. ii.*, Jessie Alice Linton, Robert Taylor.

*Hist. iii.*, Robindra Kumar Naug.

1901.

*Class i.*, Hector James Anderson, James Anderson, John Menzies Baillie Duncan, Alexander Duthie, Francis Henry Tower Gray, Norman James Henderson, William Pryde, Christina Macdonald Ross.

*Class ii.*, Alexander Cunnison, George Turner Ford, John M'Kinnon Hendrie, Matthew Smith Ketchin, Gertrud von Petzold, Alfred John Sturrock.

*Class iii.*, John Alexander Ferguson

*Phil. i.*, Alexander Watson M'Clymont.

*Phil. ii.*, Marion Isabella Gray.

*Phil. iii.*, James Waterston.

*Math. and Nat. Phil. i.*, Roderick M'Leod Shearer.

*Math. and Nat. Phil. ii.*, Alexander Robert Normand, John George Sutherland.

*Eng. i.*, John Inch Low.

*Eng. ii.*, Margaret Smith Cleghorn.

*Eng. iii.*, Jean Hill Macnair.

*Mod. Lang. i.*, Mary Ellen Macdonald Clark, Janie Middleton.

HONOURS OBTAINED AFTER GRADUATION.

1899.

*Phil. iii.*, Peter Campbell (M.A.).

*Mod. Lang. ii.*, Isabella Murray Ogilvie (M.A.).

1901.

*Class ii.*, George Wedderspoon, M.A.

*Phil. i.*, Hugh Oswald, M.A., Robert George Patterson, M.A.

*Eng. iii.*, Alexander Coghill Murphy, M.A.

ORDINARY DEGREE, 1900-1901.

28th July 1900.

John Cooper.

| Malcolm Alexander Murray.

*20th October.*

- |                                  |                              |
|----------------------------------|------------------------------|
| Anderson, William.               | MacKinnon, Una Julia.        |
| Barclay, Minnie.                 | MacKitchie, Euphemia Dawson. |
| Bowden, William Douglas Davis.   | Miller, James Sime.          |
| Clark, George Stewart.           | 15 Robertson, Samuel.        |
| 5 Copeland, Theodore Benfey.     | Scrimgeour, Alexander Carr.  |
| Crombie, Henry.                  | Shearer, Nellie Sutherland.  |
| Hendry, Robert.                  | Smith, Walter Gibson.        |
| Jardine, William.                | Somerville, James Walker.    |
| Kinnear, George William Balfour. | 20 Stewart, James Bell.      |
| 10 Leggat, William.              | Willsher, Harry Martin.      |
| Lorimer, Andrew Boyd.            | Young, David James.          |
|                                  | 23 Young, Thomas Pettigrew.  |

*12th April 1901.*

- |                                    |                                     |
|------------------------------------|-------------------------------------|
| Alexander, Margaret Anne.          | 30 Grant, Robert Donald Sutherland. |
| Allan, William Henry.              | Gunn, James Andrew.                 |
| Anderson, Alan Orr.                | Hodgson, Muriel Fillingham.         |
| Ash, David Herd.                   | Hourston, John.                     |
| 5 Black, Margaret Duncan.          | Hume, Alexander.                    |
| Cameron, Donald Ewing.             | 35 Hunter, Georgina Margaret.       |
| Cameron, James Alexander.          | Landells, William.                  |
| Cameron, William Stewart.          | Lawson, Ernest.                     |
| Clark, Alexander Fraser Macdonald. | Liddle, John.                       |
| 10 Clouston, David.                | Lindsay, Robert Fortune.            |
| Connell, Peter.                    | 40 Macalpine, John.                 |
| Core, William.                     | Macdonald, James.                   |
| Craig, Annie Kay.                  | M'Ewan, Peter.                      |
| Cunnison, David Keith.             | M'Ewen, Janet Straton.              |
| 15 Cuthbert, John Robertson.       | M'Lachlan, Helen.                   |
| Duffes, Arthur Paterson.           | 45 MacLagan, William Ferguson.      |
| Duncan, George Sang.               | M'Murtrie, John.                    |
| Dundas, Alexander Mann.            | M'Rae, Alexander.                   |
| Durham, William Robertson.         | Mason, Beatrice Swan.               |
| 20 Dykes, David Oswald.            | Matheson, Alda Margaret Mowbrey.    |
| Elder, Edward Alexander.           | 50 Mathieson, David Morley.         |
| Fraser, Allan Alexander.           | Mill, George.                       |
| Geddes, John Edward.               | Milne, Henrietta Kennedy.           |
| Gillieson, William Phin.           | Milne, John Frederick.              |
| 25 Glen, James Glas.               | More, Hugh James.                   |
| Glover, James Anderson.            | 55 Morgan, James Cumming.           |
| Gow, Annie Scott.                  | Murray, Janet Marr.                 |
| Gow, Nellie Nimmo Marshall.        | Nicol, Robert.                      |
| Grant, Annie Jane                  |                                     |

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|--|--|
| <p>Ogilvie, Andrew Shaw.<br/>Philip, Thomas Gray.<br/>60 Reid, James.<br/>Robertson, Alexander Brash.<br/>Robertson, William George.<br/>Ross, Elizabeth Jane.<br/>Selkirk, William Joseph<br/>Burns.<br/>65 Shearer, Ernest.<br/>Sim, Jane Margaret.<br/>Simpson, Hubert Louis.<br/>Smith, John.<br/>Smith, Williamina.</p> | <p>70 Spence, Carrie.<br/>Steele, Ernest Taylor.<br/>Stenhouse, William.<br/>Stephen, Mary Leith.<br/>Temple, Thomas Alexander<br/>75 Thompson, Margaret Jane.<br/>Urquhart, Murray M'Neel<br/>Caird.<br/>Wallace, Robert Charles.<br/>White, Peter.<br/>Wishart, John.<br/>80 Young, William.</p> |
|--|--|

SCHOOLMASTER'S DIPLOMA, 1900-1901.

The Diploma was conferred on the following Candidates :—

*A.—DIPLOMA FOR TEACHERS IN SECONDARY SCHOOLS.*

*12th April 1901.*

- Jessie Lees, M.A., Edin. (First Class Honours in Modern Languages).  
Janie Middleton, M.A., Edin. (First Class Honours in Modern Languages).  
David Lindsay Norrie, M.A., Edin. (Second Class Honours in Classics).

*B.—GENERAL DIPLOMA.*

*28th July 1900.*

- Elizabeth Cowe, M.A. (Edin.).  
Bessie Kay Hogg, M.A. (Edin.).

*20th October 1900.*

- James Reid Maxwell, M.A. (Edin.).

*12th April 1901.*

- Nellie Findlay Bathie, M.A., St And.  
Annabella Gardiner Clark, M.A., Edin.  
Annie Kay Craig, M.A., Edin.  
Nellie Nimmo Marshall Gow, M.A., Edin.  
George Gilbert Johnston, M.A., Edin.  
Janet Straton M'Ewen, M.A., Edin.  
Helen M'Lachlan, M.A., Edin.  
Beatrice Swan Mason, M.A., Edin.  
Margaret Jane Thompson, M.A., Edin.  
Robert Charles Wallace, M.A., Edin.



# Bursaries, Prizes, Scholarships, and Fellowships in Arts.<sup>1</sup>

## I.—BURSARIES.

NOTE—From the sums given below Income Tax will be deducted, which may be recovered by the Bursars; and in some cases a deduction will be made for expenses of administration. The accuracy of the figures is not guaranteed.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
I.	16—	George Heriot.	<i>At present</i> £570 0 0	19	3	£30 0 0	Governors of George Heriot's Trust.
		Do. Bursaries for Women.	660 0 0	22	3	30 0 0	Do.
		Do. Geo. Heriot's School University Bursaries.	630 0 0	21	4	30 0 0	Do.
		Do. High School Univer. Bursaries.	240 0 0	8	3	30 0 0	Do.
II.	1619	Archibald Johnston, Merchant in Edin.	13 0 0	1	4	13 0 0	Earl of Haddington
III.	{ 1622 1764 1766	John Trotter of Mortonhall, and Rev. J. Penman of Bothkennar.	12 18 1	1	4	12 18 1	Trotter of Mortonhall and Gilmour of Craigmillar, alternately.
IV.	{ 1626 1629 1640 1726	Hugh Wight, David M'Call, and David Christie.	13 1 1	1	4	13 1 1	Town Council.
V.	1639	Dr Robt. Johnstone of London.	31 10 0	2	4	15 10 0	Hope Johnstone of Annandale.
VI.	1639	Do. do.	25 0 0	2	4	12 10 0	Town Council.
VII.	{ 1642 1653 1696	Weir, Jenkins, Hepburn, and Lightbody.	11 7 9	1	4	11 7 9	Town Council, 1st and 2nd Presentation and Campbell Aberuchill, 3rd Presentation.
VIII.	{ 1644 1673	Jas. Dalgliesh. and Jn. M'Morran.	13 17 8	1	4	13 17 8	Town Council.
IX.	1678	John Penman, Bailie and Merchant, Edinburgh.	14 15 0	1	4	14 15 0	Society for the Benefit of the Sons of the Clergy.
X.	1678	Hector Ford of Branxton.	33 6 6	3	4	11 2 2	Town Council.
XI.	1687	Sir Andrew Ramsay of Abbotshall.	11 2 2	1	4	11 2 2	Do. and Ministers Edinburgh.
XII.	1698	Ad. Chrystie, Under Clerk of Session.	18 0 0	1	4	18 0 0	Faculty of Advocates.
XIII.	1702	Thos. Bryson, Bailie and Merchant in Dunbar.	24 0 0	2	4	12 0 0	Ministers of the Presbytery of Dunbar.
XIV.	{ 1703 1725	Pringle and Wardrop.	17 13 10	1	4	17 13 10	Pringle of Torwoodlee and J. C. Wardrop, W.S., alternately.

<sup>1</sup> See Conditions, page 163.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
XV.	1714	Rev. Robert Brown, of Protestant Con- sistory at Zamose.	£25 0 0	2	4	{ 15 0 0 10 0 0	Town Council.
XVI.	1723	Alexander Mitchell and James Shortt.	22 0 8	1	4	£22 0 8	Livingston Lear- month of Parkhall and his heirs; Earl of Morton and his heirs.
XVII.	1734	Laurence Dundas, Professor of Hu- manity in the Uni- versity of Edin.	About 42 0 0	2	4	About 21 0 0	Jas. Dundas of Dun- das, Robt. Dundas of Arniston, and Dundas of Carron- hall, by turns.
XVIII.	1768	Thos. Fraser, Clerk in the office of City Clerk, Edinburgh.	43 10 0	2	7	21 15 0	The Provost, Dean of Guild, and Treas- urer of Edin.
XIX.	1784	William Hume, East- barns, Dunbar.	24 0 0	2	4	12 0 0	Ministers of the Pres- bytery of Dunbar.
XX.	1784	Rev. Jas. Millar and Spouse.	24 0 0 About	1	4	24 0 0 About	Kirk-Session of Kip- pen.
XXI.	1809	Dr Donald Grant, London.	180 0 0	4	4	45 0 0	Earl of Seafield, and James Mackenzie, W.S., as Dr Grant's Trus.; whom fail- ing, Sen. Acad.
XXII.	1810	Rev. James Stuart.	36 0 0	2	3	18 0 0	Senatus Academicus.
XXIII.	1837	James Menzies.	200 0 0	4	4	45 0 0	Sir R. Menzies, Bart., & Ministers of Dull, Weem, & Fortingall.
XIV.	1837	Peter Dow, Esq. of Balmyle.	20 0 0	2	4	10 0 0	P. S. Keir, Esq. of Kindrogan, J. Small, Esq. of Dir- nanean, and W. A. Keir, Esq., Yr. of Kindrogan.
XXV.	1838	Robert Blair, D.D., Barton St Andrews, Norfolk.	9 12 6	1	3	9 12 6	Principal, and Profs. of Latin, Greek, Ma- thematics, Logic & Metaphysics, and Moral Philosophy.
XXVI.	1846	John Jamieson, Esq., Edinburgh.	About 25 0 0	1	4	About 26 0 0	Principal, & two Profs. of the University.
XXVII.	1846	G. P. Bidder, C.E.	43 12 0	1	4	43 12 0	Senatus Academicus.
XXVIII.	1852	Wm. Lennie, Esq.	48 0 0	4	4	12 0 0	Town Council.
XXIX.	1853	John Bruce, Esq., Trinity Crescent, Edinburgh.	160 0 0	{ 1 4 4 4	{ 4 4 30 0 0	{ 42 0 0 30 0 0	Do.
XXX.	1858	M'Diarmid Trustees.	10 0 0	1	3	10 0 0	Senatus Academicus.
XXXI.	1860	Wm. Patrick, Esq., of Roughwood.	About 150 0 0	3	4	About 50 0 0	Principal and Profes- sors in Arts.
XXXII.	1858	Edin. Ayrshire Club.	60 0 0	2	2	30 0 0	Edin. Ayrshire Club.
XXXIII.	1863	Peeblesshire Society.	20 0 0	1	4	20 0 0	Peeblesshire Society.
XXXIV.	1864	Edin. Caithness Asso- ciation.	10 0 0	1	4	10 0 0	Edin. Caithness Asso- ciation.

See Conditions, page 165.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars	For Years.	Annual Allowance to each Bursar.	Patrons.
XXXV.	1864	A.H. Rhind of Sibster.	Interest of £500 0 0	1	4	About £20 0 0	Edin. Caithness A
XXXVI.	1865	Mrs. Margt. Tyndall Bruce, of Falkland.	165 0 0	3	3	35 0 0	} Senatus.
XXXVII.	1865	Horsliehill Scott.	66 12 8	2	3	20 0 0	
XXXVIII.	1867	Miss Hannah Harrison, of Lasswade.	25 5 0	1	2	33 6 4	Do.
						25 5 0	Do.
XXXIX.	1867	Rev. John Spence	About 200 0 0	5	2	1st Year 30 0 0 2nd Year 40 0 0 3rd Year 50 0 0	Governors of Spence Bur Trust.
XL.	1869	Edin. Border Counties Association.	50 0 0	1	1	30 0 0	} Edinburgh Bo Counties Assoc
	1872			1	4	20 0 0	
XLI.	1869	Argyllshire, Bute, and Western Isles Asso.	20 0 0	1	3	About 20 0 0	Argyllshire Association.
XLII.	1870	Stewart of Ardvorlich.	16 0 0	1	4	16 0 0	Proprietor of the tate of Ardvor
XLIII.	1870	David Cowan.	About 35 0 0	1	2	About 30 0 0	} Governors of Educational Tr
				1	1	20 0 0	
XLIV.	1871	J. Robertson Sibbald.	150 0 0	5	3	30 0 0	Tr. of Dr J.R. Sibb
XLV.	1872	Angus Club.	25 0 0	1	4	25 0 0	Angus Club.
XLVI.	1873	Earl of Zetland.	About 40 0 0	1	3	About 40 0 0	Trustees of Ear Zetland.
XLVII.	1873	The Grierson Trus.	104 0 0	4	4	20 0 0	} Senatus Acad.
				1	4	26 0 0	
XLVIII.	1874	Upper Ward of Lanarkshire.	20 0 0	2	4	20 0 0	Upper Ward Ass
XLIX.	1874	Johnstone of Hart-hope.	16 5 0	1	4	16 5 0	Senatus Acad.
			About			About	
L.	1874	James Lambert.	40 0 0	1	4	40 0 0	Senatus Acad.
LI.	1875	Robert Marshall.	32 10 0	1	4	32 10 0	Senatus Acad.
LII.	1876	J. Fotheringham of Heathpool.	39 12 6	2	4	19 16 3	Senatus Acad.
LIII.	1877	Earl of Zetland.	40 0 0	1	3	40 0 0	Trustees.
LIV.	1878	Edin. E. Lothian Asso.	20 0 0	1	3	20 0 0	Association.
LV.	1878	Jas. Gillan, Forres.	63 0 0	3	3	21 0 0	Mr Gillan's Trus
LVI.	1878	Dr Andrew Thomson.	100 0 0	4	4	25 0 0	Trus. of Dr Thon
						About	
LVII.	1880	Rev. John Patterson.	16 2 4	1	2	16 2 4	Senatus Academ
LVIII.	1881	Thomas Carlyle.	About £160	8	4	20 0 0	Senatus Acad.
LIX.	1883	Subscribers to Mackinnon Testimonial	£60 18 6	3	3	20 6 2	Senatus Acad.
LX.	1882	James Whitelaw.	71 2 6	3	3	23 14 2	Senatus Acad.
LXI.	1883	William Renton, Edinburgh.	20 0 0	1	1	20 0 0	Profs. Chrystal, Crum Brown Nicholson.
			About			About	
LXII.	1883	Isabella Macdougall.	120 0 0	4	3	30 0 0	Trustees.

<sup>1</sup> See Conditions, page 167.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
LXIII.	1886	Rob. P. Newton of Castlandhill.	£90 16 8	4	2	£22 14 2	Senatus Academicus.
LXIV.	1886	Pet. C. Mann of Nairn and Durham.	80 0 0 About	3	3	26 13 4 About	Senatus Academicus.
LXV.	1886	Richd. Allan, Feuar, Kelso.	90 0 0	3	3	30 0 0	Trustees of R. Allan.
LXVI.	1887	Mrs Kidd of Aigbarth, near Liverpool.	34 0 0 About	1	4	34 0 0 About	Senatus Academicus.
LXVII.	1887	Charles Jardine of Thorlieshope.	280 0 0 About	8	4	35 0 0 About	Senatus Academicus.
XVIII.	1887	Charles Howatson, Esq. of Dornel and Glenbuck.	27 0 0 About	1	3	27 0 0 About	Trustees.
LXIX.	1888	Mrs Harriet E. Morrison.	27 0 0 About	1	4	27 0 0 About	Senatus Academicus.
LXX.	1889	Daniel Maclaurin, London.	68 5 0 About	1	4	68 5 0	Town Council.
LXXI.	1889	James Simson, Edin- burgh.	150 0 0	6	3	25 0 0	Presbytery of Edin- burgh.
XXII.	1890	George Cousin.	28 0 0	1	3	28 0 0	Senatus Academicus.
XXIII.	1890	Rev. Thomas Maule.	85 10 0	4	6	21 7 6	Principal, and Profs. of Humanity & Greek.
XXIV.	1891	Donald Fraser, M.D., London, and En- dowment Associa- tion.	51 0 0	1	1	51 0 0	Senatus Academicus.
XXV.	1897	Misses Baxter of Bal- gavies.	60 0 0 About	2	3	30 0 0 About	Senatus Academicus.
XXVI.		James Stewart, Duart.	35 0 0	1	3	35 0 0	Kirk-Sess. of Callan- der and Trossachs.

# CONDITIONS OF TENURE.

These *Heriot Bursaries* are for Students unconnected with the George Heriot's School, entering upon a regular Curriculum in Arts or Science with a view to graduation. *Bursars*—1900, Maxwell M. Wedderburn, William P. Cousin, Charles P. Grant, Peter G. Brown, John Morrison, Mackenzie Douglas, William R. Cunningham.

*Heriot Bursaries for Women.* These Bursaries are for Women Matriculating for the first time at the University with a view to graduation in Arts or Science, and cannot be held along with any other Bursary or Scholarship, without the express sanction of the Patrons. *Bursars*—1900, Annie R. Murray, Jane Crow, M. Towers, Marion H. Archibald, Jessie B. T. Weir, Harriet Cowe, Grace M. Pears, Isobel M. Nelson, Agnes R. Cameron.

*George Heriot's School University Bursaries.* These are awarded by competitive examination among Scholars attending the George Heriot's School, and may be held at any University approved by the Governors. *Bursars*—1900, James G. Gog, L. P. M. Gardner, Geo. D. Walker, James T. Johnstone. Alex. C. Vance.

<sup>1</sup> See Conditions, page 171.

*Heriot High School University Bursaries.* These are awarded by competitive examination among Scholars attending the High School, Edinburgh, and may be held at any University approved by the Governors. *Bursars*—1899, Wm. Farquharson, John Handyside, H. W. Jamieson; 1900, Gilbert Watson, James G. Mitchell, Andrew H. Cuthbert.

II. *A. Johnston Bursary.*—Each Bursar is entitled to hold this Bursary for four years, subject to the conditions that he shall pass such examination as may be required of Presentation Bursars, and shall proceed through the Curriculum in Arts, and pass the Examinations for M.A. appropriate to each year. No one is permitted to hold the Bursary along with any other Bursary in the University. The Bursar must attend the Classes in the Arts Curriculum. *Bursar*—1900, Oswald H. Ewing.

III. *Trotter and Penman Bursary.* This Bursary is held under the same conditions as No. II. *Bursar*—1900, T. J. Anderson.

IV. *Wight, McCall, and Christie Bursary.* This Bursary is held under the same conditions as No. II.

V. and VI. *R. Johnstone Bursaries.*—By Ordinance No. 82, the holder of each of the four Robert Johnstone Bursaries is entitled to hold his Bursary for four years, subject to the condition that he shall pass the Preliminary Examination or its equivalent, and shall proceed through the Curriculum in Arts, and regularly pass the Examinations required for the degree of M.A. No person is allowed to hold any of these Bursaries along with any other Bursary in the University. Agents, Messrs Hope, Todd & Kirk, W.S., 119 Princes Street Edinburgh, agents for the Patron. *Bursars*—John Graham, Andrew Glendinning.

VII. *Weir, Jenkins, Hepburn, and Lightbody Bursary.*—For a Student in Arts, who must pass the Preliminary Examination or its equivalent, and follow the Curriculum for the Degree of M.A.

VIII. The *Dalglish and Macmorran* Bursar must pass the Preliminary Examination or its equivalent, and proceed through the Curriculum in Arts in the University, and regularly pass the Examinations required for the Degree of M.A.

IX. *Penman Bursary.*—The Bursar must attend the Classes in the Arts Curriculum. *Bursar*—Alexander F. Jack.

X. Each *Ford* Bursar is entitled to hold his Bursary for four years, subject to the condition that he shall pass the Preliminary Examination or its equivalent and shall proceed through the Curriculum in Arts, and regularly pass the Examinations required for the Degree of M.A. No person is permitted to hold any of the Bursaries along with any other Bursary in the University.

XI. The *Sir A. Ramsay* Bursar holds his Bursary for four years, subject to the condition that he shall pass the Preliminary Examination or its equivalent, and shall proceed through the Curriculum in Arts, and regularly pass the Examinations required for the degree of M.A. No person is permitted to hold either of the Bursaries along with any other Bursary, Fellowship, or Scholarship of any Scottish University.

XII. The *Chrystie Bursary* is held for four years. Candidates must pass the Preliminary Examination or its equivalent. The Bursar is taken bound to attend "the usual classes," and must produce yearly to the Faculty certificates from the respective Professors of his due attendance, and the diligent prosecution



studies. Candidates are referred for information to the Clerk to the Faculty Advocates, Advocates' Library.

III. The *Bryson Bursars* must pass the Preliminary Examination or its equivalent, and are first to enter the Humanity class: afterwards to pass through rest of the classes in Arts until their Laureation; at which time, if judged the ministers of the Presbytery of Dunbar fit for the study of Theology, they continue for two years in Theology.

IV. The *Pringle and Wardrop Bursary*.—The Bursar must pass the Preliminary Examination or its equivalent, and attend the classes in the Curriculum Arts for M.A. Bursar—*James W. E. Gladstone*.

V. The *Brown Bursaries* are payable to Bursars who must pass the Preliminary Examination or its equivalent, and attend the regular course of study in Arts M.A.

VI. The *Mitchell and Shortt Bursary* is payable to a Student who must pass the Preliminary Examination or its equivalent, during the regular course in Faculty of Arts. David Campbell, S.S.C., 31 Moray Place, Agent for the Lord of Morton. Bursar—*John Robertson*.

VII. *Dundas Bursaries*.—By Ordinance No. 78 of the Universities' Commissioners, each person presented to either of the Dundas Bursaries is entitled to hold the same for four years as a Student of Arts, subject to the conditions that he shall pass the Preliminary Examination or its equivalent, and proceed through the Curriculum in Arts, and shall regularly pass the Examinations required for M.A. These Bursaries cannot be held with any other Bursary in the University. Bursar—*A. P. Duffes*.

VIII. The *Fraser Bursaries*.—Bursars must pass the Preliminary Examination or its equivalent, and proceed through the curriculum till they finish their course and take the Degree in the Faculty of Arts. The Bursaries are held for three years thereafter; the Bursars making their election whether to follow Theology, Law, or Medicine. Two Classes at least must be attended each Winter Session. Candidates should apply to the City Clerk, Council Chambers, Edinburgh.

IX. The conditions of the *Hume Mortification* correspond with those of the *Fraser's*, No. XIII., and the presentations and payments are made as in that

X. *Millar Bursary*.—To be held by a Student intended for the Ministry in the Church of Scotland, during his Curriculum in the Faculty of Arts. Bursar must pass the Preliminary Examination or its equivalent.

XI. The *Grant Mortification*. Tenable in the Faculties of Arts, Science, Theology, Law, or Medicine. Applications for information may be made to Messrs Mackenzie, Innes, & Logan, W.S., 23 Queen Street, Edinburgh.

XII. *Stuart Bursaries*.—Open to Students entering upon the second year of the course for graduation in Arts or in Pure Science. The said Bursaries shall be tenable for three years, provided that if the holders graduate at the end of their first year of tenure they shall only retain their Bursaries during the third year of the course if they engage in a course of study approved by the Senatus Academicus in the subjects included in the Curriculum for Degrees in Arts or in Pure Science.



*Bursars*—1896, J. M. Dunnett; 1898, W. N. Prophet, S. G. Corner, for two years.

XXIII. *Menzies*.—These Bursaries, four in number, were founded in 1837 by James Menzies, Esq., Glasgow. They are of the annual value of £45 each, but vary in amount at discretion of the patrons, and tenable for four years, in any one of the Universities of St Andrews, Glasgow, or Edinburgh. Preference first to the relations of the Founder; next, to the name of Menzies; failing whom, to persons born on the estate of Sir Robert Menzies, Bart., within the parishes of Dull, Weem, and Fortingall; failing whom, any Student who shall be found best qualified may be appointed. Candidates must pass the Preliminary Examination.

XXIV. *The Dow Bursaries* are tenable for four years, "at any of the Scottish Universities, St Andrews in preference." Apply to the Patrons.

XXV. The *Blair Bursar* must pass the Preliminary Examination, attend the Classes, and pass the Examinations necessary for the Degree of M.A. *Bursar*—1898, R. F. Lindsay.

XXVI. The *Jamieson Bursary* is for the benefit of the sons of schoolmasters, farmers, mechanics, and labourers, born and residing within any one of the following parishes—viz., Crawfordjohn, Crawford, united parishes of Lamington and Wandell, united parishes of Wiston and Robertson, Culter and Biggar. The Bursar must pass the Preliminary Examination or its equivalent. He may attend Classes in any of the Faculties. *Bursar*—1898, Thomas W. Stewart.

XXVII. Called the "*Jardine Bursary*," being founded by Mr Bidder, C.E., as a memorial of the munificence of Sir Henry Jardine to him, to which he owed the advantage of his education at the University of Edinburgh. Candidates must be natives of Scotland. The Bursar must pass the Preliminary Examination or its equivalent, and attend the Classes, and pass the Examinations necessary for the Degree in Arts. *Bursar*—1890, J. C. H. Macnair.

XXVIII. *Lennie Bursaries*.—Bursars must pass the Preliminary Examination or its equivalent, and attend the Classes in the Arts Curriculum. Candidates should apply to the City Clerk, Council Chambers, Edinburgh.

XXIX. *Bruce Bursaries*.—Prior to the commencement of each Winter Session five Students are presented yearly, the most distinguished of the five receiving the £40 Bursary. The Bursars must be in regular attendance on the Classes necessary for the Degree of Master of Arts. Candidates to apply to the City Clerk, Council Chambers.

XXX. The *M'Diarmid Bursary* is a memorial of the late John M'Diarmid Esq., Editor of the *Dumfries and Galloway Courier*. Candidates must be natives of the county of Dumfries or the stewartry of Kirkcudbright. The Bursar must pass the Preliminary Examination and attend the Classes and Examinations necessary for the Degree of Master of Arts. Applications regarding the Bursary be made to "H. Gordon, Esq., Dumfries." *Bursar*—1899, A. J. Scott.

XXXI. The *Patrick Bursaries* are for the assistance of those who have completed a course of education at any of the public schools or academies in the county of Ayr, where a course of Classical Study is pursued. The rectors or head teachers of each of said schools or academies may grant a certificate or letter to any number, not exceeding four, of the best scholars who have completed the course of education at such school or academy, and are in a position to enter

to apply for admission to the University; and the parties holding such letters or certificates are entitled to present themselves for examination as candidates for the Bursaries. Failing qualified candidates, the Senatus may award open competition. The Bursars must attend the Classes and pass the Examination necessary for the Degree in Arts, in the order required by the Faculty. See 197 of CALENDAR for 1865-66. *Bursars*—1898, *P. B. M. Macaulay*; 1900, *W. Jackson*.

XXXII. *Ayrshire Club Bursaries*.—Restricted to natives of Ayrshire, men or women, and tenable for two years. Apply to the Secretary of the Club, Andrew Muir, Esq., W.S., 23 Castle Street, before 15th September. *Bursar*—1898, *Gemmell*.

XXXIII. *Peeblesshire Society Bursary*.—Open to Candidates of either sex who wish to pursue the Curriculum in Arts, Science or Medicine. Apply to the Secretary of the Society, P. H. Cosens, Esq., W.S., 22 York Place, Edinburgh.

XXXIV. and XXXV. *Caithness and Rhind Bursaries*.—Bursars must attend classes in Arts Curriculum. Apply to Secretary of the Association, Mr A. Laing, Esq., 41 Charlotte Square, Edinburgh.

XXXVI. *Bruce of Grangehill and Falkland's Bursaries*.—Three of these Bursaries, of the annual value of £35, are awarded after competitive examination to students of the second year in their course of study for a Degree in Arts; and the others, of the annual value of £20, to Students entering the first year of the Arts Curriculum. *Bursars*—First year, 1898, *Peter White*; 1900, *J. B. Alexander*; *J. P. Lowson*; second year, 1899, *E. B. Ross*; 1900, *George Robertson*.

XXXVII. *Horsliehill-Scott Bursaries*.—Annual value £33, 6s. 2d., under deduction of £6, 6s. for Examiners' fees from first year's payments. Open to Students in the third year of their course for a Degree in Arts, and tenable for two years. Examination is in Classics, Mathematics, and Logic and Metaphysics. Deed of Foundation, at p. 208 of CALENDAR for 1866-67. *Bursars*—1899, *W. H. Son*; *W. Booth-Gravelly*.

XXXVIII. *The Harrison Bursary* is of the annual value of £25, 5s., under deduction of £6, 6s. of Examiners' fees from first year's payments. Open to Students in the third year of their course in the Faculty of Arts, with a view to a degree, and tenable for two years. It is to be awarded to the competitor who shall show the greatest proficiency in Classics, Mathematics, and Logic and Metaphysics. Deed of Endowment, p. 231 of CALENDAR for 1867-68. *Bursar*—1899, *W. Hendrie*.

XXXIX. *Spence Bursaries*.—By the regulations of the Governors, two Bursaries, of the annual value of £30 for the first year and £40 for second year of course, are open to Students of either sex who, after passing the preliminary examination, or such other examination as may from time to time be accepted by the Joint Board of Examiners as equivalent thereto, have attended one Winter Session or its equivalent in the Faculty of Arts in the University of Edinburgh, have attended at least two classes qualifying for Graduation, and who intend to complete the course of study for the degree of Master of Arts at the University. The Governors may award to any Bursar, if they are satisfied of his or her merit, a Continuation Bursary of an annual value of £50, tenable for one year, on con-

dition that the Bursar shall for that year attend such a curriculum of study in any of the Faculties as the Governors may approve. Subjects of Examination are Latin, Greek, and Mathematics. Candidates apply to Mr Henry A. Pattullo, Solicitor, 1 Bank Street, Dundee, Factor to the Trust, for particulars.

XL. *Border Counties and Sir Walter Scott Bursaries*.—These Bursaries are open to competition by Scholars (women as well as men) who have attended any school in either of the Counties of Roxburgh, Berwick, Selkirk, or Borough of Berwick-on-Tweed, for two complete sessions immediately prior to the time of their examination for the Bursaries. The Bursars must attend the classes necessary for a Degree in Arts. Application to be made to Mr T. Usher, Sheriff Court House, Edinburgh.

XLI. *Argyllshire Bursary*.—Candidates (male or female) must be natives of Argyllshire, Bute, or Western Islands. The holder must attend the classes necessary for a Degree in Arts. Application to be made to George A. Munro, Esq., S.S.C., 6 Rutland Square, Edinburgh.

XLII. *Ardsiorlich Bursary*.—Open to Students of Arts, natives of the parishes of Comrie, Balquhiddy, Callander, or Killin, failing whom, to natives of Perthshire, and failing such, to the best qualified candidate. Candidates must show that they require aid in obtaining a University education. The holder must pass the Preliminary Examination or its equivalent. He will also be examined in Preliminary Gaelic, and must attend Arts or Science classes. The Bursary cannot be held with any other Bursary exceeding £25 annually. For remodelled Foundation, see CALENDAR 1887-88, p. 501; for original deed, see p. 275 of CALENDAR for 1870-71. *Bursar*—1898, D. H. Ash.

XLIII. *Cowan Bursary*.—Candidates must be about to enter the Curriculum in Arts. Annual value for first two years £30, and £20 for third year, to be held alternately at Edinburgh and Glasgow Universities. Information will be afforded by J. G. M'Skimming, Esq., Accountant, Ayr. *Bursar*—1898, David Lees.

XLIV. *Sibbald Bursaries*.—The Bursaries are available to Students in the Faculties of Arts, Medicine, Law, or Divinity, and are open to Students entering the University who have not previously attended any University in the United Kingdom or elsewhere, and who do not hold any other Bursary or Scholarship, but there will be no objection to a Candidate that he has, during the previous Summer Session, attended any of the Classes in the University of Edinburgh required by the Faculties of Medicine or Law. See CALENDAR for 1888-89 pp. 171 and 177. Application to be made to Messrs Mackenzie, Innes, & Logan W.S., 23 Queen Street, Edinburgh. *Bursars*—1898, J. M. McIntosh; 1900 Thomas B. Johnston, James Gunn.

XLV. *The Angus Club Bursary*.—Open to Forfarshire students entering the University for the first time. Application should be made to the Secretary of the Club, Mr William Whyte, S.S.C., 4 Albyn Place, Edinburgh.

XLVI. *Orkney and Zetland Bursary*.—Open in 1901 to first year Student (male or female), natives of the Islands or County of Orkney and Zetland, or children of parents one or both of whom shall have been born in or connected for a long period of years with the said Islands or County. It is tenable for three years. The Bursar must attend the Classes in the Curriculum in Arts, with a view to a Degree. Applications to be sent to Messrs Dundas & Wilson, C.S.

St Andrew Square, Edinburgh. The Deed of Foundation will be found in CALENDAR for 1873-74, p. 329.

LXVII. *Grierson Bursaries*.—Four Bursaries of £20 each, and one of £24, awarded annually in November. They are restricted in the first place to natives of any of the parishes of Crawford or Leadhills, who must pass the Preliminary Examination or its equivalent. In the event of more than one preferential Candidate, the examination is competitive. If no preferential Candidates, the Bursaries are thrown open for competition to all Students then intending to enrol in the University for the First Session of the Curriculum in Arts, the subjects of examination being as for open Bursaries of the First Year. See Trust Disposition of the Founder at p. 335 of CALENDAR for 1873-74, and p. 368 of the CALENDAR for 1877-78. *Bursars*—1898, *W. Booth-Graveley*, *J. M. Sutherland*; 1899, *George Grierson*, *J. H. MacLagan-Wedderburn*.

LXVIII. *Lanarkshire (Upper Ward of) Bursaries*.—Examination as for preferential Bursaries.—Bursars must attend the Classes in the Arts Curriculum. For other particulars apply to Mr R. Brown, Secretary, 28 St Andrew Square.

LXIX. *Johnstone of Harthope Bursary*. Natives of Moffat, Peebles, and students of the name of Alexander or Johnstone preferred, if applications (with certificate of birth) be made to Secretary of Senatus before 1st of September. The successful candidate must attend the Classes in the Faculty of Arts, and take the Degree of M.A. See Deed of Foundation, at p. 350 of CALENDAR for 1875-76. *Bursar*—1899, *Daniel Johnstone*.

LXX. *Lambert Bursary*.—This Bursary cannot be instituted until after the death of an annuitant. See Deed of Foundation, at p. 342 of CALENDAR for 1875-76.

LXXI. *Marshall Bursary*.—Restricted in the first place to relatives of Founder, in the second place to Students of the name of Marshall, and in third place to natives of West Lothian. See Deed of Foundation, at p. 347 of CALENDAR for 1875-76. *Bursar*—1900, *John B. Marshall*.

LXXII. *Fotheringham and Forrest Bursaries*. Restricted in the first place to natives of the Founder, in the second to such as are of the name of Fotheringham, and in the third place to such as are of the name of Forrest, and failing all these to be awarded as an open Bursary. The successful candidate must attend the Classes in the Faculty of Arts, and take the Degree of M.A. *Bursar*—1897, *Thomas Nicol*; 1898, *A. W. Madsen*; 1900, *Stephen Forrest*.

LXXIII. *Earl of Zetland's Bursaries*.—These Bursaries are open to First Year Students (male or female) in the Faculty of Arts, who are natives of the Islands of Orkney and Zetland, or children of parents, one or both of whom have been born in or connected for a long period of years with the said Islands or County. For Deed of Foundation of these Bursaries, see p. 373 of CALENDAR for 1877-78. Application to be made to Messrs Dundas & Wilson, 16 St Andrew Square, Edinburgh.

LXXIV. *Edinburgh East Lothian Association's Bursary*.—The Bursary may be awarded for by any lad under the age of 18, who has been educated at any school in East Lothian, or who, having passed through all the standards or higher standards at such schools, shall have afterwards attended for not more than two sessions any secondary school within or without the county. Application may be made to J. Purves, S.S.C., 65 Frederick Street, Edinburgh.



LV. *Gillan Bursaries*.—Founded in 1878 by James Gillan, draper, Forres. These Bursaries are for the support at the University, and at the New College, Edinburgh, of two young men connected with the parish of Forres, and one connected with Dyke, who have declared their intention to study for the ministry of the Free Church of Scotland. For particulars apply to Messrs R. & R. Urquhart, Solicitors, Forres.

LVI. *Thomson Bursaries*.—Candidates of the name of Thomson or Traquair, or natives of town or county of Dumfries or city of Edinburgh, preferred. See Deed of Foundation, p. 367 of CALENDAR, 1877-78, and Scheme of Allocation, p. 346 of CALENDAR, 1879-80. Applications to be made to Messrs Traquair, Dickson & Maclaren, W.S., 11 Hill Street. *Bursars*—1897, R. W. Johnson; 1898, C. D. O. Barrie; 1899, Robert Younger.

LVII. *Patterson Bursary, in Anglo-Saxon, Grammar, and Literature*.—Open to Students in the second, third, or fourth year of their Matriculation who have attended the class of English Literature. The holder must produce a Certificate of Attendance on the Honours Course in English Language in the first Session after his appointment. The Examination will include Anglo-Saxon, Grammar, Translations of passages of Anglo-Saxon prose and verse, and the History of Anglo-Saxon Literature. See Deed of Foundation at p. 379 of CALENDAR for 1880-81. 1900, Lapsed Bursary—A. C. Murphy, M.A.

LVIII. *John Welsh Bursaries*, founded by Thomas Carlyle in 1881, in memory of his Father-in-law, to whom the estate of Craigenputtock in Dumfriesshire, bequeathed by Mr Carlyle to the University of Edinburgh, formerly belonged. The Bursaries are paid from the rents of that estate, and are eight in number, of the value of about £20 each, tenable for four years. They are awarded, after competition, to Students entering the University, who have not studied in any other University. Four are to be given to the competitors most proficient in Mathematics, and four to those most proficient in Classics. They are not to be held with any other Bursary. See Deed of Foundation at p. 379 of CALENDAR for 1881-82. *Bursars*—(Classical)—1898, W. B. Brander; 1899, J. L. Geddie; 1900, J. L. McCallum. (Mathematical)—1898, J. A. A. Morrison; 1899, John Anderson, James Black; 1900, A. J. Merriles.

LIX. *Mackinnon Bursaries*.—Three Bursaries about £20, 6s. 2d., tenable for three years, to encourage the study of the Mechanical Sciences. Each Bursary is open for competition to Students entering their First Session in the Faculty of Arts. Candidates must be natives of the counties of Argyll, Bute and Arran, Inverness, Ross or Sutherland, and must be able to speak the Gaelic language. The Examination is held at the annual competition for Bursaries at the beginning of each Session, with an additional examination in Gaelic by the Professor of Celtic; at least 10 per cent. of the total marks attainable being assigned to Gaelic. Each Bursar is bound to attend at least two classes in the Faculty of Arts during his tenure and among these six classes, at least one class of Mathematics, one of Natural Philosophy, and the class of Engineering. The Bursaries cannot be held along with any other Bursary, Scholarship, or Fellowship in a Scottish University, or with any office yielding an annual income of £50 or upwards, and is tenable only during good behaviour and proficiency. *Bursars*—1898, Charles Macpherson; 1899, D. C. Gordon; 1900, Alexander Mackay.

X. *Whitelaw Bursaries*.—In memory of James Whitelaw, Watcher. Three Bursaries, about £23, 14s. 2d. each, tenable for three years, open to students about to enter, or who follow the Curriculum in Arts. Cannot be held along with any other Bursary, Scholarship, or Fellowship in a Scottish University, with any office yielding £50 annually, or upwards. Examination in October annually. *Bursars*—1898, *J. A. Cameron, C. F. Allan*; 1900, *F. N. Philip*.

XI. The *Renton Bursary*, founded by the Trustees of the late William Renton, 20 Royal Terrace, Edinburgh, is not restricted to Students of the first year. The holder must attend one or more of the classes of Natural Philosophy, Mathematics, Chemistry, or Political Economy. Pecuniary circumstances will be taken into consideration. It cannot be held by anyone under the age of sixteen or above twenty-one, or with another Bursary of the annual value of £50 or upwards. The examination is in English and Mathematics, as for the first Year Open Bursaries. *Bursar*—1900, *W. T. Rogers*.

XII. The *Macdougall Bursaries* are open to Students of Edinburgh, Glasgow, and St Andrews Universities. Students attending the Gaelic Class to be preferred. The Bursaries cannot be held with any Bursary or appointment yielding upwards of £50 per annum. See Deed of Foundation at p. 435 of CALENDAR 1885-86. Application may be made to Mr W. C. Young, solicitor, Edinburgh.

XIII. *Newton Bursaries*.—Two are awarded annually, one to the most distinguished Student in the Junior Class of Natural Philosophy, and one in the Senior (Second) Class of Mathematics. The Bursaries are tenable for two years, and the Bursars must continue their studies in the higher branches of the subjects of their Bursaries, and at the end of the second year of tenure, either take Honours in Mathematics and Natural Philosophy, pass the 2nd B.Sc. Examination, or produce other evidence of advanced study in Mathematics or Natural Philosophy. These Bursaries are not to be held with other Scholarships or Bursaries. See Deed of Foundation, p. 460 of CALENDAR, 1886-87. *Bursars*—1901 (*Math.*), *Heribald King*; (*Nat. Phil.*), *P. D. Innes*.

XIV. *Mann Bursaries*.—(1.) Candidates must be children of residents in the town of Nairn, *i.e.*, one or both parents must have resided within the municipal boundaries for at least twelve months at any period prior to the competition. (2.) Applications must be lodged with the Clerk of Senatus at least three weeks before the Annual Bursary Examination of the University, along with evidence of compliance with Rule I. (3.) One will be awarded annually to the candidate, articulating for the first time in this University, who obtains the highest marks at Entrance Bursary Examination in English, Latin, Greek, and Mathematics, provided the Examiners be satisfied with the standard he has attained. (4.) Each will be tenable for three years, value about £26, 13s. 4d. per annum. (5.) Failing candidates of the first year, the vacant Bursary will be awarded as a second year Bursary to the candidate who obtains the highest marks in the Bursary Examination for the second year; and, failing candidates of the first and second years, it will similarly be awarded as a third year Bursary. When awarded under this Rule it is tenable



for one year only. (6.) Failing candidates qualified under Rule III. or Rule V., the Senatus may continue one of the Bursaries to its holder for a fourth year, provided he propose to continue his studies for a fourth year in some special subject. (7.) Each Bursar must be *bona fide* engaged in studying for a Degree in Arts or in Science, and must produce evidence at the end of each Winter Session that he has attended at least two classes in the Faculty of Arts, or in a Department of Science, and has made reasonable progress in his studies. (8.) Any breach of these regulations, or conduct unworthy of a scholar and a gentleman, will be punished by forfeiture of the Bursary. See Deed of Foundation, p. 497 of CALENDAR 1887-88, and Regulations at p. 544 of CALENDAR for 1890-91. *Bursars*—1898, *John Alexander*; 1899, *H. L. Mackenzie*; 1901, *C. J. Macpherson* (for one year).

LXV. *Allan Bursaries*.—These Bursaries are available to Students attending classes in any of the Faculties of Arts, Medicine, or Law, in the University of Edinburgh, or to Students attending the classes in said University necessary for Degrees in Science; and are tenable for three years or for such part of that period as the Bursar shall remain a Student at the University. In nominating Candidates for presentation to the Bursaries, care will be given to prefer such as have been born in the parish of Kelso, provided they are qualified by their previous education for entering the University. Apply to P. Stormonth Darling, Esq., writer, Kelso.

LXVI. *James Fairbairn Bursary*, founded by Mrs Kidd of Palmyra, Aigharth, near Liverpool, in memory of James Fairbairn, late Governor of Heriot's Hospital, is open to competition to first year Students, and is tenable for four years. The Bursar is required to attend the Classes necessary for Graduation in Arts, and to take the Degree at the end of the Course. The Bursary cannot be held along with any other Bursary or Scholarship. See Deed of Foundation, p. 501 of CALENDAR, 1887-88. *Bursar*—1900, *A. F. Giles*.

LXVII. *Jardine of Thorlieshope Bursaries*.—Natives of the rural districts of Roxburghshire and Dumfriesshire (villages and towns of the population of 2000 and upwards being excluded), who have attended the Public or Board Schools in said counties, to be preferred. In the event of there being no first year Candidates, the Bursaries will be thrown open to Candidates of the second, third, or fourth year in succession, but will be tenable for one year only. The Bursars are required to attend the Classes necessary for Graduation in Arts, and to take the Degree at the end of the Course. The Bursaries cannot be held along with any other Bursary or Scholarship. See Deed of Foundation, p. 497 of CALENDAR, 1887-88. *Bursars*—1898, *J. P. Ross*, *C. L. Hunter* (four years); 1900, *James McCaig*, *David Henderson*, *George Young*.

LXVIII. *The Glenbuck Bursary* may be held by a Student in any of the four Scotch Universities—preferably that of Glasgow or of Edinburgh. Candidates only are eligible who have resided not less than five years in the Parish of Muirkirk, and who have received part of their education at any school therein, or alternatively and postponed thereto, those who have been resident in any one of the Parishes of South Ayrshire for not less than five years, and who have received

of their education in any school in the same Parish. For further particulars, apply to Mr R. A. Leslie, Inspector, Muirkirk.

XIX. *MacKenzie (Stornoway) Bursary*.—Candidates of the name of MacKenzie have a preference. The Examination is the same as for First Session Open Bursaries, and the Bursary will be awarded to the Candidate who stands highest, provided he has passed the Preliminary Examination in at least two subjects, of which must be Latin, Greek, or Mathematics on the Higher Standard. Being a preferential Candidate, the Bursary will be thrown open to competition as a first year Bursary in Arts. The Bursar is required to attend the Classes necessary for Graduation in Arts, and to take the Degree at the end of the year. For Regulations, see CALENDAR for 1895-96, p. 748. *Bursar*—1900, C. Mackenzie.

XX. This Bursary, tenable for four years, is by the will of the founder to be called the "Maclaurin Bursary," and is restricted to Students of the Founder's College of Maclaurin (or in Gaelic orthography "Maclalhrin"). The holder must pass the Preliminary Examination. It may be held in any of the Faculties. See Deed of Foundation, p. 544 of CALENDAR for 1890-91.

XXI. Six Bursaries, each of the annual value of £25, and tenable for four years in the Faculty of Arts. They are open to Students who, having passed the Preliminary Examination, are entering on the first year of the Course in Arts, and are studying for the Ministry of the Church of Scotland. For regulations of tenure and subjects of examination, apply to the Rev. George T. Thomson, The Manse, Portobello, Clerk to the Presbytery of Edinburgh. *Bursar*—

XXII. *Bailie Cousin's Bursary* is open for competition to Students entering the Faculty of Arts on a regular course for the Degree of M.A. The holder must annually pass the departmental examinations appropriate to each year. The Bursary cannot be held along with any Fellowship, Scholarship, or Bursary of any Scottish University, or with any situation or appointment yielding an annual income of £30 or upwards. For Deed of Foundation see CALENDAR 1891-92, p. 536. *Bursar*—1900, L. F. Robertson.

XXIII. *Maulc Bursaries*—These Bursaries are for the education of poor deserving Students. They may be held by Students prosecuting their studies in any of the Faculties. The Examination is the same as for University Open Bursaries. See Excerpt from Trust Deed, p. 543 of CALENDAR for 1891-92, and Deed of Foundation, in CALENDAR for 1894-95. *Bursars*—1898, A. J. Andrew Renwick (five years); 1899, F. J. Chalmers; 1900, James Munro.

XIV. *The Donald Fraser Bursary* is awarded for high merit in the University Class of Natural Philosophy, combined with proficiency in Laboratory work. The Bursar is required to give assistance in the University Physical Laboratory, and to engage in research there. The Bursary cannot be held along with any other Fellowship, Scholarship, or Bursary in any Scottish University. See Deed of Foundation, p. 545 of CALENDAR for 1891-92. *Bursar*—1901, J. Ogilvie, M.A.

LXXV. *The Baxter of Balgavies Bursaries* are open both to men and women who have been educated in the High School of Dundee for at least one year immediately preceding the competition. The subjects of Examination, and the values attached to each subject, are the same as for the Open Bursaries in Arts with the omission of Italian, and the addition of Chemistry (full marks, 50), as a subject of Examination. Candidates may select not more than five subjects, and the successful candidates may study for the Degrees of M.A., B.Sc., B.L., LL.B., or M.B., Ch.B.

The successful candidates must have passed the Preliminary Examination in Arts or Science, or its equivalent. For Regulations, see page 429 of CALENDAR for 1897-98. *Bursars*—1898, *A. J. Laing*; *Norman D. Mudie*.

LXXVI. *The James Stuart Bursary* is tenable by a native of Parishes of Callander or Trossachs studying in any Scottish University with a view to taking the Degree of M.A. *Patrons*—The Kirk-Sessions of Callander and Trossachs.

## II.—PRIZES.

*See note under Bursaries, page 160.*

### I.—THE LORD RECTOR'S PRIZE.

The Lord Rectors since 1879, during their respective tenures of office, have offered a Prize of Twenty-five Guineas annually, for the best Essay on a Historical Subject.

1900. *E. M. Barron.*

### II.—EDINBURGH UNIVERSITY CLUB (OF LONDON) TRIENNIAL PRIZE.

A Prize of Twenty Guineas, open triennially, for competition in any of the Faculties by Graduates of the University of not more than two years' standing, is offered by the Edinburgh University Club of London (James Taylor, M.A., M.D., Hon. Secretary, 49 Wellbeck Street, London, W.), for the best Essay on a subject prescribed by the Deans of the Faculties in the following rotation (viz., Arts, Divinity, Law, Medicine, and Science), subject to the approval of the Senatus. The Prize will be open in 1901 in the Faculty of Divinity.

1898. *G. C. Rankin, M.A.*

### III.—BRUCE OF GRANGEHILL AND FALKLAND'S PRIZE IN THE CLASSES OF LOGIC AND METAPHYSICS.

This Prize of £20 (with a supplementary Prize of £10 for the Junior Division of the Class) is awarded to the most distinguished student in

this class, "on such conditions and competition as the Professor may direct, and on his decision," for excellence in the study of Logic and Metaphysics. It was founded in 1865, by Mrs Tyndall Bruce of Grangehill and Falkland, in commemoration of John Bruce, Professor of Logic and Metaphysics in the University, 1774-1786.

1901. *A. W. McClymont, M.A.* } equal.  
*R. G. Paterson, M.A.*

#### IV.—GRAY PRIZES.

The Gray Prize Essay Fund was instituted in 1851, in terms of the Will of Simon Gray, Esq., of Mornington Crescent, London. The Trustees offer annually for competition, three prizes of £15 for the first, £10 for the second, and £5 for the third best Essay on a subject to be announced on the Board at the University gate. The competition is open to students of not more than three years' standing at the commencement of the Winter Session. For further information apply to the Rev. John Blackwood Munro, Duns, Secretary to the Trustees.

#### V.—SCOTT AND DUNBAR PRIZE.

This Prize, of the value of about £20, was founded in 1872 by the Rev. Hew Scott, D.D., of Anstruther Wester, for encouraging the study of the Greek Language in the University of Edinburgh. It is awarded annually to "the most deserving and learned student in the Greek Classes," after such Examination as may be directed by the Principal and the Professors of Divinity, Greek, and Humanity. See Deed of Foundation at p. 332 of CALENDAR, 1873-74.

1901. *J. M. B. Duncan, M.A.*

#### VI.—THE COUSIN PRIZE.

This Prize, founded in connection with the Class of Fine Art by the late David Cousin, Esq., is of the annual value of about £15, 4s., and is awarded at the close of each session for proficiency in Class Essays set from time to time by the Professor. See Excerpt from Mr Cousin's will in CALENDAR, 1880-81, p. 380.

1901. *John McDougall.*

#### VII.—KELLAND MEMORIAL PRIZE.

The Committee for promoting a Memorial to the late Professor Kelland has handed over to the University the sum of £147, 10s., for the purpose of founding a Prize to be called the "Kelland Memorial Prize," to be awarded annually to the most distinguished Student in Pure Geometry in the Junior Mathematics Class. The value of the Prize is about £4, 12s.

1900. *A. J. Merriles.*

### VIII.—GLADSTONE MEMORIAL PRIZE IN HISTORY, POLITICAL SCIENCE, AND ECONOMICS.

This Prize, of the value of £5 in books, is awarded annually to the student who, in the opinion of the Professors of History, the Professor of Political Economy, and the Professor of Public Law, has obtained the highest distinction within the two preceding years in any two of these subjects. A student to whom the Prize has been awarded will not be re-eligible. Applications, with the necessary Certificates, to be lodged with the Clerk of Senatus not later than 30th March.

1901. *Robert D. Bell, M.A.*

### IX.—THE BLACKIE CELTIC PRIZE.

This Prize, of the value of about £50, for promoting the study of the Celtic Language and Literature, is open triennially in October to Matriculated Students of the University, and to Graduates of any Scottish University, under the age of 30 and within six years of the date of their graduation. The Examination is in the Gaelic Language and Literature, and if the Examiners think fit also in any other branch of the Celtic language. The Prize consists of the interest of about £650 accumulated for three years. See Regulations at page 828 of CALENDAR for 1900-1901.

## III.—SCHOLARSHIPS.

NOTE—*From the sums given below Income Tax will be deducted, which may be recovered by the Scholars; and in some cases a deduction will be made for the expenses of administration. The accuracy of the figures is not guaranteed.*

### I.—PITT CLUB CLASSICAL SCHOLARSHIP.

The Pitt Club Scholarship of the annual value of about £58, 10s., tenable for four years. By ordinance No. 17 of the Scottish Universities' Commissioners of 1858 it is open for competition to all who have passed regularly through the Course in Arts in the University, and have been admitted to the Degree of M.A. in Edinburgh, at any time within four years before the competition takes place. The subjects embraced in the examination are CLASSICS and ENGLISH LITERATURE. The next competition may take place in April 1902.

1901. Not awarded.

### II.—MACKENZIE CLASSICAL SCHOLARSHIP.

This Scholarship was founded in 1862, by James Mackenzie, Esq., W.S. It is of the annual value of about £109, tenable for four years, and the award carries with it free admission to the Edinburgh Philosophical Institution during the years of tenure. By ordinance No. 90 of the Scottish Universities' Commissioners of 1858, it is open for competition to all Graduates in Arts in the University of Edinburgh of



not more than three years' standing at the time of the competition. Candidates are examined in CLASSICAL LITERATURE and in ENGLISH LITERATURE, and the Examination is conducted by three or more Examiners selected by the Senatus from their own body. It cannot be held along with any other Scholarship, Fellowship, or Bursary, of any Scottish University. The Examinations include—1. Translations from Latin and Greek authors; 2. Composition in Latin and Greek Prose; 3. Latin and Greek Literature, and History; 4. English Essay-Writing; 5. History of English Literature. The next competition may take place in April 1905.

1901. *William Rennie, M.A.*

### III.—SIR DAVID BAXTER MATHEMATICAL SCHOLARSHIP.

This Scholarship, founded by Sir David Baxter, Bart., of Kilmaron, is of the annual value of about £65, 9s. 2d., and is tenable for four years. By the terms of the Deed of Foundation (given in the CALENDAR for 1864-65, p. 171) it is awarded for proficiency in the department of Mathematics, particularly in that branch of it which includes mechanical and physical science. Competitors must be Graduates in Arts of the University, of not more than four years' standing at the time of the competition, who have taken Honours in the department of Mathematics and Natural Philosophy. The next competition may take place in April 1904.

1900. *J. Chalmers Leighton, M.A., B.Sc.*

### IV.—SIR DAVID BAXTER PHILOSOPHICAL SCHOLARSHIP.

This Scholarship, also founded by Sir David Baxter, Bart., of Kilmaron, is of the annual value of about £65, 9s. 2d., and is tenable for four years. By the terms of the Deed of Foundation (given in the CALENDAR for 1864-65, p. 171), it is awarded for proficiency in the Department of Mental Philosophy. Competitors must be Graduates in Arts of the University, of not more than four years' standing at the time of the competition, who have taken Honours in the Department of Mental Philosophy. The subjects of examination are Logic, Metaphysics, and Moral Philosophy. The next competition may take place in April 1903.

1899. *Alexander Mair, M.A.* } equal.  
*G. R. T. Ross, M.A.* }

### V.-VII.—JOHN EDWARD BAXTER SCHOLARSHIPS.

These Scholarships were founded in 1876, and are three in number, each of the annual value of about £83, and tenable for three years. One is in the Department of Classical Literature, another in Mental Philosophy, and the third in Mathematics and Natural Philosophy.



They are open for competition to all Masters of Arts of the University of not more than three years' standing at the time of the competition. The Scholarship in Mental Philosophy may be open in April 1903, and those in *Mathematics* and *Classics* may be open in April 1902. See Deed of Foundation at p. 361 of CALENDAR for 1877-78.

1899. *J. S. Ross, M.A. (Cl.).*

*J. T. Young, M.A., B.Sc. (Math.).*

1900. *John M. Shaw, M.A. (Phil.).*

#### VIII.—DRUMMOND MATHEMATICAL SCHOLARSHIP.

This Scholarship was founded in 1865 by Miss Elizabeth Drummond, in memory of her brother, Captain Drummond, R.E., Under Secretary for Ireland. It is of the annual value of about £95, 5s., and is tenable for three years. By the Deed of Foundation (given at p. 198 of CALENDAR for 1865-66), it is open to Graduates in Arts of not more than three years' standing, who have graduated with Honours in the Department of Mathematics. It cannot be held with any other Bursary or Scholarship, and the holder is recommended to travel for the purpose of inspecting, in this and other countries, remarkable engineering and architectural structures, to extend his knowledge of the practical application of Mathematical principles; and, if required by the Senatus Academicus, to deliver reports on the principal structures examined by him, and the Mathematical principles exemplified thereby; which reports the Senatus may cause to be publicly read in the University or elsewhere in Edinburgh. The next competition may take place in April 1903.

1900. *Alexander Brown, M.A., B.Sc.*

#### IX.—BRUCE OF GRANGEHILL AND FALKLAND'S CLASSICAL SCHOLARSHIP.

This Scholarship, founded in 1865 by Mrs Tyndall Bruce of Falkland, is of the annual value of about £100, and is tenable for three years, during two of which the studies of the Scholar must be prosecuted in the University of Edinburgh, but in the third year they may be prosecuted in an English or Foreign University. By the terms of the Deed of Foundation (given at p. 205 of the CALENDAR for 1866-67), this and the two following Scholarships held by Students who have passed their Examinations for the Degree of Master of Arts with Honours, have hitherto been conferred upon the most distinguished in that one of the Honours Departments which is appropriated for each year. The Scholarship cannot be conferred upon any one whose age exceeds twenty-three years, and it cannot be held with any other Scholarship or Fellowship of a Scottish University, or with any situation yielding an income of £100 per annum. In the event of the Scholarship becoming vacant during the period of tenure, through resignation or otherwise, of the Scholar, then the sum

falling in shall be bestowed by the Senatus for the remaining period of tenure on a Student attending the Divinity Classes who shall be reported by the Faculty of Theology to be a meritorious Student and deserving of the Scholarship. The next award may be made in April 1902.

1899. *C. G. Mackay, M.A.*

#### X.—BRUCE OF GRANGEHILL AND FALKLAND'S SCHOLARSHIP IN MENTAL PHILOSOPHY.

This Scholarship, founded in 1865 by Mrs Tyndall Bruce of Falkland, is of the annual value of about £100, and is tenable for the same period, and under the same conditions as the preceding. The subjects of examination are Logic and Psychology, Metaphysics, Moral Philosophy, and History of Philosophy. The next award may be made in April 1904.

1901. *A. W. McClymont, M.A.*

#### XI.—BRUCE OF GRANGEHILL AND FALKLAND'S MATHEMATICAL SCHOLARSHIP.

This Scholarship, founded in 1865 by Mrs Tyndall Bruce of Falkland, is of the annual value of about £100, and is tenable for the same period, and under the same conditions as the preceding. The subjects of examination are Mathematics and Natural Philosophy. The next award may be made in April 1902.

1899. *R. D. Bell, M.A.*

#### XII.—GRAY SCHOLARSHIP.

This Scholarship, founded by Mr Gray of Baad Park in 1864, is of the annual value of about £89, and tenable for two years. It is awarded for distinction in one of the Honours groups of subjects for the Degree of Master of Arts, or in one of the groups of subjects for the Final Examination for the Degree of Bachelor of Science, or in the Historical and Philosophical subjects of the examination for the Degree of Bachelor of Laws, or to Students in the Faculty of Divinity for distinction in the Final Examination for the Degree of Bachelor of Divinity. It has been resolved that the Scholarship shall be offered in rotation in the Faculties of Arts, Science, Law, and Divinity. When it falls to the Faculty of Arts it will be offered in rotation in the order of the groups of Honours subjects in the Arts regulations, and when it falls to the Faculty of Science, it will be offered in one of the groups of the Second Science Examination. When not awarded in the Faculty in which it is offered, it will then be offered to the other Faculties in rotation. The holder of the Scholarship is required, as a condition of tenure, to satisfy the Senatus Academicus that he is pursuing special higher studies, or that he is engaged in original research, either in the University of Edinburgh or in another University approved by the University Court, and he must also satisfy the Senatus Academicus

of the importance of the work he proposes to undertake, and of his qualifications for such work. In 1903 the Scholarship will be offered in the Faculty of Divinity.

1899. *John William Eastham, B.Sc.*

### XIII.—GILCHRIST SCHOLARSHIPS.

These Scholarships were founded in 1865 by the Trustees of the late Dr Gilchrist; they are three in number, each of the annual value of £100, and are open to natives of India who have passed competitive examinations at the Presidential Colleges of India. They are attached to the Medical, Law, and Literary Classes in the University.

### XIV.-XV.—FETTES EXHIBITIONS.

These Exhibitions are each of the annual value of £60, and are tenable for four years. They are open annually for competition, one among the Foundationers alone, and the other among the Foundationers and such other pupils as have attended Fettes College regularly for not less than five years.

### XVI.-XVII.—RHIND SCHOLARSHIPS.

These Scholarships were, in accordance with the will of the late A. H. Rhind, Esq., of Sibster, founded by his trustees on the reversion of his estate. They are two in number, one in the Department of Classical Literature, the other in that of Philosophy, are each of the annual value of about £80, 6s., are tenable for not less than two years, or more than three years, and are open to Undergraduates and to Graduates of not more than three years' standing at the time of the competition. Competitors must have attended classes in this University for not less than three *winter* sessions or their equivalent, attendance being defined to mean that the competitors must present Certificates of having attended at least four classes during the period aforesaid, and of having duly performed the work of the classes. The successful Candidates may be required to undertake duties connected with the teaching of the University, or otherwise assist in some department of its operations. *See* Deed of Foundation at p. 323 of CALENDAR for 1874-75. The next competition for the Classical Scholarship may take place in April 1904, and the next competition for the Philosophical Scholarship may take place in April 1902.

1899. *A. S. Ballantyne, M.A. (Phil.).*

1901. *H. J. Anderson, M.A. (Cl.).*

### XVIII.—THE CHARLES MACLAREN SCHOLARSHIP.

This Scholarship, founded in 1871 by the Trustees of Mrs Maclaren, in memory of Charles Maclaren, Esq., the eminent geologist, is of the

annual value of about £115, 19s., and is tenable for three years. It is for the encouragement of the study of Mathematics and Natural Philosophy, and is open to all graduates in Arts of not more than three years' standing at the time of the Competition (and under 30 years of age) who shall have taken honours in Mathematics. The successful competitors are to spend a few months in travelling and in examining remarkable Engineering and Architectural Structures, and to report to the Senatus, which report the Senatus may cause to be publicly read in the University. The Deed of Foundation is given at p. 324 of CALENDAR for 1873-74. The next competition may be in April 1902.

1899. *M. C. M'Alpin, M.A.*

#### XIX.—NEIL ARNOTT SCHOLARSHIP FOR EXPERIMENTAL PHYSICS.

This Scholarship, value about £34, 7s. 6d., was founded in 1874, and is awarded annually to the most distinguished Student in the Physical Laboratory of the University.

The recipient must, during the ensuing Summer and Winter Sessions, assist the Professor of Natural Philosophy in the Laboratory. Failing a Student deemed by the Professor worthy of the Scholarship, it may be given to the Candidate for a Degree in Arts who has undergone the Examination in Natural Philosophy with most distinction. See Deed of Foundation, at p. 340 of CALENDAR for 1875-76.

1901. *A. J. Ritch.*

#### XX.-XXII.—FERGUSON SCHOLARSHIPS.

The examination of Candidates for Three of these Scholarships, each of the annual value of £80, and tenable for two years, will be held in Glasgow, on Tuesday, 24th September 1901, and following day. One of the Scholarships to be awarded for the greatest proficiency in Classics; one for the greatest proficiency in Mathematics, including Natural Philosophy; and one for the greatest proficiency in Mental Philosophy, including Logic, Psychology, Metaphysics, and Moral Philosophy.

The Competition is open to "all persons who have passed the Examinations required for the Degree of Master of Arts in one of the Universities of Scotland (whether taking the Degree at the same time or not) provided that at the time of the Competition not more than six years have elapsed since the date of their first matriculation after having passed the Preliminary Examination, and who have not already gained one of these Scholarships." Candidates are required to enter their names at the Office of the Ferguson Bequest Fund, 94 Bath Street, Glasgow, not later than 1st September 1901.

For further information apply at the Office of The Ferguson Bequest Fund, 94 Bath Street, Glasgow.

## SCHOLARS, 1900.

*Classical*—James McLean Watson, M.A., St Andrews University.  
*Mathematical*—David Kennedy Picken, M.A., Glasgow University.  
*Philosophical*—Thomas Meikle Watt, M.A., Aberdeen University.

## XXIII.-XXXII. VANS DUNLOP SCHOLARSHIPS.

TEN VANS DUNLOP SCHOLARSHIPS, each of the annual value of about £100, and tenable for three years, are, by the Deed of Foundation, appropriated to the following subjects:—1. English Literature and Poetry; 2. Classical Learning—Latin and Greek; 3. Commercial and Political Economy and Mercantile Law; 4. Logic and Metaphysics; 5. Natural Philosophy; 6. Mathematics; 7. Hebrew and Oriental (Semitic) Languages; 8. History; 9. Moral Philosophy; 10. Sanskrit and Comparative Philology. In terms of the Trust-Disposition (which is given at p. 350 of CALENDAR for 1880-81), the Scholarships are given only for “distinguished proficiency” in the various subjects of competition, as determined by the Examiners and the Senatus Academicus.

The following are the General Regulations for the Examinations:—

Competitors for these Scholarships must have regularly attended at least one full Course or two Half-Courses in the University of Edinburgh during each Academic year in which they claim to have been Matriculated Students, and no Candidate is eligible who has discontinued attendance at the University of Edinburgh for more than one year. The years of Academic study count from the first year in which a Candidate has attended one of the classes qualifying for the degree of M.A.

Each Scholarship is tenable on condition that the Scholar submits annually to the University evidence that he is prosecuting his studies, or his professional work, in a manner satisfactory to the Senatus. The evidence may consist of—(1) Certificates of attendance on Lectures or Laboratories in this or some other University; or (2) Certificate of having acted as Assistant to a Professor in this or some other University; or (3) A written Report of work done by the Scholar during the year, together with a Thesis composed by himself on a subject connected with that work.

Not more than one of these Scholarships can be held by the same person, and Vans Dunlop Scholars cannot hold, along with their Scholarship, any other Fellowship, Scholarship, or Bursary in the University of Edinburgh.

Candidates for the Vans Dunlop Scholarships must, on entering for the Examinations, produce evidence that they have fulfilled the conditions of eligibility.

Candidates, if not already matriculated, are required to pay the Matriculation Fee for the year in which the competition takes place.

The names of Candidates highly distinguished in the Vans Dunlop Scholarship examinations may be published.



## XXIII.—ENGLISH LITERATURE AND POETRY.

Candidates are subjected to an Examination testing—(1.) Knowledge of the History of English Literature generally, and more particularly through a prescribed period ; (2.) Acquaintance with certain books, chiefly of English Poetry, prescribed for special reading ; (3.) Ability in English Composition, in the form of an Essay, written in the Examination Room, on some subject of literary criticism.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed five academic years either in this University alone or in this and any other University or Universities together ; and who have given regular attendance in the Class of Rhetoric and English Literature, and in at least one other class on English Language or Literature. The next Competition may take place in March 1903.

The Professor of Rhetoric and English Literature, and an Examiner appointed by the Senatus, are the Examiners.

1900. *John Purves.*

## XXIV.—CLASSICAL LEARNING—LATIN AND GREEK.

1. *Latin*.—The Examination will test :—

(a.) Knowledge of Latin books and special subjects previously prescribed.

(b.) Power of Latin Composition, and of translating from Latin authors not previously prescribed.

(c.) Knowledge of Latin History and Literature.

2. *Greek*.—(a.) Knowledge of Greek books and special subjects previously prescribed.

(b.) Power of Greek Composition, and of translating from Greek authors not prescribed.

(c.) Knowledge of Greek History and Literature.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed four academic years either in this University alone or in this and any other University or Universities together ; and who have given regular attendance in the Latin and Greek Classes necessary for graduation in Arts.

The next Competition will take place in October 1902.

The Professors of Humanity and Greek are the Examiners.

1899. *James Crerar, M.A.*

## XXV.—COMMERCIAL AND POLITICAL ECONOMY AND MERCANTILE LAW.

The Examination will test knowledge of the subjects assigned in the Deed of Endowment to the Chair of Commercial and Political Economy and Mercantile Law. It will include the subjects embraced

in the Lectures, and also in books prescribed from time to time by the Appropriate Board of Studies.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed five academic years either in this University alone or in this and any other University or Universities together; and who have regularly attended the Class of Commercial and Political Economy and Mercantile Law. The next Competition will take place in October 1901.

The Professor of Political Economy and an Examiner appointed by the Senatus are the Examiners.

1898. *D. T. Boyd.* } equal.  
*T. Fraser Scott.* }

#### XXVI.—LOGIC AND METAPHYSICS.

The Examination will test knowledge of (*a.*) Logic, (*b.*) Psychology, (*c.*) Metaphysics and the History of Philosophy. It will include the subjects embraced in the Lectures on each of these branches; also prescribed Reading and Studies of special subjects.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed four academic years either in this University alone or in this and any other University or Universities together; and who have completed attendance at the Ordinary Class of Logic and Metaphysics. The next Competition will take place in October 1903.

The Professor of Logic and Metaphysics and the Professor of Moral Philosophy are the Examiners.

1900. *A. W. M'Clmont.*

#### XXVII.—NATURAL PHILOSOPHY.

The Examination will test the knowledge of the Candidates in Experimental Physics and Applied Mathematics.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed six academic years either in this University alone, or in this and any other University or Universities together; and who have attended at least two of the classes of Natural Philosophy, of which the Ordinary Course must be one. The next Examination will take place in March 1904.

The Professor of Natural Philosophy and an Examiner appointed by the Senatus are the Examiners.

1901. *Edward B. Ross.*

#### XXVIII.—MATHEMATICS.

The Examination will test Candidates in pure mathematical subjects

in the Honours Department for the Degree of Master of Arts, and in special subjects to be prescribed by the Examiners from time to time.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed six academic years either in this University alone or in this and any other University or Universities together; and who have attended at least two of the Mathematical Classes, one of these being an Honours Class. The next Examination will take place in March 1904.

The Professor of Mathematics and an Examiner appointed by the Senatus are the Examiners.

1901. *Robert D. Bell, M.A.*

#### XXIX.—HEBREW AND ORIENTAL (SEMITIC) LANGUAGES.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed six academic years either in this University alone or in this and any other University or Universities together; and who have attended at least two courses under the Professor of Hebrew and Oriental Languages.

Candidates will be examined in Hebrew, Syriac, and Arabic.

The Examiners are the Professor of Hebrew and Oriental Languages, and an Examiner appointed by the Senatus. The next Competition will take place at the end of March 1902.

1899. *Richard Bell, M.A.*

#### XXX.—HISTORY.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed five academic years either in this University alone, or in this and any other University or Universities together; and who have attended two or more courses of Professorial Lectures on History within the University.

The Examiners are the Professors of History, and such others as may be appointed by the Senatus from time to time. The next Competition will take place in October 1901.

1898. *John M'Farlane, M.A.*

*Prox. access., Alex. B. Robb, M.A.*

#### XXXI.—MORAL PHILOSOPHY.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed four academic years either in this University alone or in this and any other University or Universities together; and who have completed attendance at the Ordinary Class of Moral Philosophy.

The Professor of Moral Philosophy and the Professor of Logic and

Metaphysics are the Examiners. The next Competition will take place in October 1901.

1898. *D. H. Macgregor, M.A.*

1900. *G. Claus Rankin, M.A.* (lapsed Scholarship for 1½ year).

### XXXII.—SANSKRIT AND COMPARATIVE PHILOLOGY.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed six academic years either in this University alone or in this and any other University or Universities together; and who have attended at least two courses under the Professor of Sanskrit and Comparative Philology.

The Examiners are the Professor of Sanskrit and Comparative Philology, and another Examiner to be appointed by the Senatus. The next Competition will take place in March 1904.

1901. *H. C. Norman, M.A.*

### XXXIII.—SKIRVING SCHOLARSHIP FOR MORAL PHILOSOPHY.

This Scholarship is to be founded (after the death of an annuitant) in accordance with the Will of the late David Skirving, of No. 13 Westbourne Park, London. It will be of the annual value of about £50, and tenable for three years. *See* Deed of Foundation at p. 350 of CALENDAR for 1876-77.

### XXXIV.—LANG SCHOLARSHIPS.

This is a Bequest by the late John Lang, Esq. of Warren Park, Ayrshire, with the object of founding four Scholarships, to be called the "Lang Scholarships," one in Natural Philosophy, one in Mathematics, one in Chemistry, and one in Botany. The capital sum will be payable on the death of the survivor of two liferenters.

### XXXV.—MACKAY SMITH SCHOLARSHIP IN NATURAL PHILOSOPHY.

This Scholarship is of the annual value of £25, and tenable for two years, is open for Competition to Students who have attended the Class of Natural Philosophy in this University. The successful candidate is required to attend the class of Natural Philosophy, or to prosecute the study of Natural Philosophy during at least one year of his tenure of the Scholarship, in such a way as the Senatus may direct or approve. The next award may be made in April 1902.

1900. *William Gentle.*

Lapsed Scholarship for one year, *D. G. Mitchell, B.Sc.*

## XXXVI.—GEORGE SCOTT (TRAVELLING) SCHOLARSHIP.

This Scholarship of about £35, 7s. 6d., is awarded annually (a previous holder not being ineligible for re-election), for the purpose of assisting Graduates in Arts of the University, of not more than three years' standing at the date of their election as Scholars (in the selection of whom a preference shall be given to natives of Perthshire, should any such apply) to travel for purposes of Study or Research. Applicants are required to state:—(1) The purpose for which they desire to use the Scholarship; and (2) What other means they have towards the object in view. The award will be based—(1) On the importance of the work to be undertaken; (2) the sufficiency of the means proposed to be applied to the work; (3) the capability of the applicant for the work he proposes to undertake. The holders are required in all cases to satisfy the Senatus, by half-yearly reports, that they are carrying out the work undertaken; and must present a final report or deliver a short Course of Lectures on their work when completed. The appointment is made by the Senatus on a report by the Faculty of Arts on the merits of the applicants. Preference will be given to Candidates desiring to undertake work in the following groups of subjects, under the following scheme of rotation, provided always that a suitable Candidate presents himself:—(1) Classical Languages and Classical Archaeology; (2) Mental Philosophy; (3) Mathematical and Physical Science; (4) Semitic and Indian Languages; (5) English and Modern Languages; (6) History. In 1902 the first preference will be given to a Candidate in the Group of English and Modern Languages. See Deed of Foundation in CALENDAR for 1897-98, page 419.

1901. *William Porter, M.A.*

## XXXVII.—MACPIHERSON SCHOLARSHIP.

This Scholarship is awarded annually by the Senatus Academicus to a student who has, within six years of the date of the competition, completed the examination necessary for the degree of Master of Arts in the University of Edinburgh, with or without honours, who has included in his examination the subjects of Latin and Greek, and who has attended the class of Celtic and attained distinction in that subject. The scholar must study Celtic in a University or other place offering special facilities for Celtic study, subject to the approval of the Senatus Academicus. The Scholarship is of the annual value of about £87, 12s. 10d., and is tenable for one year. Before 15th February next after his appointment the scholar must submit to the Senatus Academicus a report of the work he has done, and of such further studies in Celtic as he proposes to prosecute, and the Senatus Academicus may, if they think fit, appoint him to the said Scholarship for a further period of one year. In the case of a scholar being reappointed for a second year a new scholar cannot be appointed till the following year.

1901. *Alan O. Anderson, M.A.*



## XXXVIII.—THE NICHOL FOUNDATION.

The free yearly interest or income derivable from this foundation, amounting to about £50, shall be paid to a deserving Student, who shall regularly attend and devote himself as assistant in the Physical Laboratory, and who shall be bound to give his whole time in promoting the study of Natural Philosophy in connection therewith. It is tenable for one year, but on the recommendation of the Professor of Natural Philosophy it may be continued for a second year or longer. It cannot be held along with any Bursary or Scholarship. See Deed of Foundation in CALENDAR for 1897-98, page 419.

1901. *W. Gentle.*

## XXXIX., XL.—RITCHIE SCHOLARSHIPS FOR THE STUDY OF ORIENTAL LANGUAGES.

These Scholarships, endowed by the late James Ritchie, formerly of Edinburgh, are for Candidates for the Civil Service of India. They are open annually, are each of the annual value of about £40, and tenable in the first instance for one year. They are not tenable along with any other Scholarship or Bursary without the express approval of the Senatus. Candidates must be eighteen years of age at the date of application (1st October), and they must be still eligible to compete for the Civil Service in the following August. The Scholarships will be awarded without examination, on the basis of work already done at Edinburgh University. Candidates will be expected to show evidence of some such distinctions as the following:—Second Class Honours (at least) in some department of the Faculty of Arts; a degree in Science; or Class Certificates of Merit (First Class) in three or four different subjects. The holders will be required (1) to declare their intention of competing for the Civil Service; (2) to submit from time to time evidence of industry and progress in the subjects which they intend to offer in the Civil Service Competition. The holder of a Scholarship may offer himself again as a Candidate. He will not be debarred from entering his name for the Home as well as the India Service; and in the event of his being high enough in the list to have the option of a Home appointment, he will be free so to choose.

1900. *F. H. T. Gray.*

*D. G. Mitchell, B.Sc.*

## XLI.—GEORGE HERIOT'S TRAVELLING SCHOLARSHIP FOR TEACHERS OF MODERN LANGUAGES (MEN OR WOMEN).

This Scholarship of £100, tenable for one year, shall be offered for Competition in 1902. It will be open to a Graduate in Arts of this University, of not more than four years' standing at the date of election as Scholar, who has passed the Degree Examination (Honours or Ordinary) in one of the Modern Languages either before or after

graduation, has attended an Honours Class in the Language for which the Scholarship is awarded, has obtained the Schoolmaster's Diploma from the University of Edinburgh, and who is, or intends to become, a Teacher of Modern Languages. The Scholarship shall be awarded to the Candidate who stands highest in French or in German as the case may be. For further particulars apply to David Lewis, Esq., Treasurer, George Heriot's Trust, 20 York Place, Edinburgh, from whom schedules of application may be obtained, which must be lodged with him not later than 15th March.

1901. *Janie Middleton, M.A.*

#### IV.—FELLOWSHIPS.

*See note under Bursaries, p. 160.*

##### I.—GUTHRIE FELLOWSHIP IN CLASSICAL LITERATURE.

This fellowship, founded in 1866 by James Guthrie, Esq., London, is of the annual value of about £85, 15s., and is tenable for four years. By the terms of the Deed of Foundation (given at p. 210 of the CALENDAR for 1866-67) it is for proficiency in Classical Literature, and is open to Graduates in Arts of the University who have taken their Degree since the last competition. Students who have passed all their examinations for a Degree since the last competition, but have deferred graduating, are also eligible. It cannot be held along with any other Fellowship or Scholarship in a Scottish University. The next Competition may take place in April 1903.

1899. *A. B. Keith, M.A.*

##### II.—THE HAMILTON PHILOSOPHICAL FELLOWSHIP.

This Fellowship, founded in 1866 by the Subscribers to the fund for a Memorial to the late Professor Sir William Hamilton, and by the Association for the better endowment of the University, is of the annual value of about £84, 15s., and is tenable for three years. By the Deed of Foundation (given at p. 213 of CALENDAR for 1866-67), the Fellowship is open to all Graduates in Arts of the University of Edinburgh not more than three years' standing at the time of the competition. It cannot be held along with any other Scholarship or Fellowship in any Scottish University. The subjects of examination are Logic, Metaphysics, Moral Philosophy, and the History of Philosophy. The next competition may take place in April 1903.

1900. *D. H. Macgregor, M.A.*

### III.—SHAW FELLOWSHIP IN MENTAL PHILOSOPHY.

This Fellowship, founded in 1867 by Contributors to a Memorial to Sir James Shaw, Bart., a native of Ayrshire, afterwards Lord Mayor of, and M.P. for, London, and by the Association for the better endowment of the University, for the encouragement of the study of Logic, Psychology, Metaphysics, Moral Philosophy, and the History of Philosophy, is awarded after competitive examination on these subjects. It is open to Graduates in Arts of any of the four Scottish Universities, of not more than five years' standing at the time of the competition, is of the annual value of about £139, 11s. 2d., and is tenable for five years. It cannot be held along with any other Fellowship, Scholarship, or Bursary in any Scottish University, and it is not open to the competition of any person who already holds a Fellowship in any English or Irish University, though the holder of the Shaw Fellowship will not be precluded from afterwards obtaining an English or Irish Fellowship. The holder is required during the fourth or fifth year of his tenure of the Fellowship to deliver in this University a Course of four Lectures on any of the subjects for the encouragement of the study of which the Fellowship was founded. The next Competition for the Fellowship may take place in December 1904 at the beginning of the Christmas holidays. (Deed of Foundation, p. 237 of CALENDAR for 1868-69.)

1899. *J. B. Baillie, M.A.* (Edin.).

*Prox. access.*, A. M. Mackay, M.A. (Aber.).

### IV.-VIII.—GEORGE HERIOT RESEARCH FELLOWSHIPS.

Applications for Fellowships or for renewal of Fellowships should be made annually, not later than 1st June. For further particulars apply to the Governors of George Heriot's Trust, 20 York Place, Edinburgh.

1900. *John Lees, M.A.*

### ENDOWMENTS FOR RESEARCH.

#### I.—WILLIAM DICKSON TRAVELLING FUND.

This Fund (the interest of which amounts to about £85 per annum) has been established for the purpose of assisting Graduates (men or women) of any Faculty, of not more than Three Years' standing, to travel, for a shorter or longer period, for purposes of study or research. Grants from the Fund may be made to holders of Scholarships, Bursaries, &c. Applicants are required to state—“(1) The purpose for which the Applicants desire to get a Grant for travelling; (2) the total amount of expenditure thought necessary; (3) the other means they have towards meeting this expenditure; and (4) the amount of the Grant required from the Fund.” The award of a grant to be based on—“(1) The im-

importance of the work proposed to be undertaken ; (2) the sufficiency of the means proposed to be applied to the work ; (3) the capability of the Applicants for the work they respectively propose to undertake." "Holders of Grants in all cases to satisfy the *Senatus* by periodical reports that they are carrying out satisfactorily the work or investigation undertaken ; and to present a final report, or to deliver a course of public University Lectures on their work when completed." Applications, on Special forms to be obtained at the Matriculation Office, must be lodged with the *Secretary of Senatus* on or before 15th March annually. For Deed of Endowment, *see* p. 514 of *CALENDAR*, 1889-90.

# I.—EARL OF MORAY ENDOWMENT FOR THE PROMOTION OF ORIGINAL RESEARCH.

1. The available income (which amounts to about £570 per annum) is, in the first place, applied to the payment of the actual expenses of the prosecution of Original Research, present or contemplated, intended and likely to increase existing human knowledge, in any of its departments.

In such expenses would be included apparatus, special accommodation, specimens, chemical substances, books, journals, pamphlets, reproductions of manuscripts, &c., and actual maintenance and travelling expenses, in so far as they are shown to be necessary for the purposes of research, provided that it shall be permissible to furnish out of the income such specific additions to the Library as may be deemed necessary to stimulate and aid research.

All apparatus, specimens, books, journals, pamphlets, &c., and all unused chemical substances shall, at the termination of the research, be returned, or otherwise accounted for to the University.

2. Any surplus income after meeting the claims defined in 1, above, may be expended in (a) the printing and publishing of noteworthy results, including illustrations for papers containing such results ; and (b) the payment, after careful consideration of all the circumstances, of such grants of money as may be necessary to enable applicants to enter upon or carry on the work of research, or to encourage the prosecution of research.

3. All graduates and other members of the University, "or other persons who have given satisfactory proof of general education and of fitness to engage in some special study or research," are entitled to apply for assistance.

4. In so far as the subject of the research admits, the investigation shall be conducted in the buildings of the University.

5. Applications should be addressed to the Secretary of *Senatus*. *See* Regulations in *CALENDAR* for 1897-98, page 428.

## THE SWINEY LECTURESHIP ON GEOLOGY.

This Lectureship is in the patronage of the Trustees of the British Museum, is of the annual value of about £144, and is open to Graduates in any of the Faculties in this University who have obtained their Degrees after examination. For further particulars *see* under Faculty of Science, page 288.

FELLOWSHIPS, SCHOLARSHIPS, UNIVERSITY PRIZES,  
AND BURSARIES, OPEN DURING THE ACADEMIC YEAR  
1901-1902.

Candidates for the Fellowships and Scholarships open in Spring must give their names and addresses to the Clerk of Senatus, University, Edinburgh, *on or before* 15th March annually.<sup>1</sup> The Examinations will take place in the *Examination Hall*, University, at the same time as the Examinations in the corresponding subjects for Graduation in Arts with Honours, unless otherwise stated.

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## Fellowships.<sup>2</sup>

*Three George Heriot Fellowships for Research* are offered annually. Each of these Fellowships is of the annual value of £100, is tenable for one year only, but may be renewed for a second year. Copies of the regulations and schedules of application may be had from the Governors of George Heriot's Trust, at their Offices, 20 York Place, Edinburgh. Applications for Fellowships or for renewal of Fellowships should be made annually, not later than 1st June.

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## Scholarships.<sup>2</sup>

1. *Pitt Club Classical Scholarship*, No. I., page 176.
2. *Rhind Philosophical Scholarship*, No. XVI., page 180.
3. *John Edward Baxter Scholarship in Classics*, No. V., page 177.
4. *Bruce of Grangehill and Falkland's Classical Scholarship*, No. IX., page 178.
5. *Charles Maclaren Mathematical Scholarship*, No. XVIII., page 180.
6. *Bruce of Grangehill and Falkland's Mathematical Scholarship*, No. XI., page 179.

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<sup>1</sup> The Senatus reserve power to relax this Regulation in cases where they are satisfied that very special cause has been shown.

<sup>2</sup> For further information, and for information regarding other Fellowships, Scholarships, Bursaries, and Prizes, *see* page 176, where full information regarding the conditions and values, &c., are given. The values of the Fellowships, Scholarships, Bursaries, and Prizes are subject to variation consequent on the rise and fall of the rate of interest, &c.



7. *John Edward Baxter Scholarship in Mathematics*, No. V., page 177.

8. *Vans Dunlop Scholarship in Commercial and Political Economy and Mercantile Law*, No. XXV., page 183. The Competition for this Scholarship will take place after the conclusion of the Graduation Examinations in Law in October 1901. Names to be entered on or before 28th September.<sup>1</sup>

The following books are recommended:—Adam Smith's *Wealth of Nations*, Book V.; Seebohm's *English Village Community*, chs. i. v.; Gomme's *Village Community*; Vinogradoff's *Villeinage in England*; Cunningham's *Growth of English Industry and Commerce*, Vol. I.; Sidgwick's *Principles of Political Economy*, Book III.; Marshall's *Principles of Economics*, Vol. I.; Nicholson's *Principles of Political Economy*; Bastable's *Public Finance*; Pantaleon's *Pure Economics*; Keynes' *Scope and Method of Political Economy*; Sidgwick's *Elements of Politics*, chs. i.-xii.

9. *Vans Dunlop Scholarship in History*, No. XXX., page 185.

The Competition will take place on the third Monday, Tuesday, and Wednesday of October 1901, beginning at 10 A.M. each day. Names to be entered on or before 27th September.<sup>1</sup>

The Subjects of Examination are—

(1) History of Great Britain to 1885.

(2) Constitutional History of (a) England, 1307-1536; (b) United States, 1763-1789; (c) France, 1830-1884.

(3) History of Scotland, 1603-1707, with special reference to the Union of 1707.

10. *Vans Dunlop Scholarship in Moral Philosophy*, No. XXXI., page 185.

The Examination will test knowledge of Philosophy, specially on its Ethical side. It will include the following works:—

(1) Sigwart's *Logic*, Vol. I.; Ward's Article on *Psychology*; James' *Principles of Psychology* (Chapters on Association, Emotion, and Will); Kant's *Critique of Pure Reason* (The Aesthetic and the Analytic); Plato's *Republic*, and Aristotle's *Nicom. Ethics*, Books I.-IV.; Butler's *Three Sermons on Human Nature*; Kant's *Groundwork of the Metaphysics of Ethics*; Mill's *Utilitarianism*; Sidgwick's *Methods of Ethics*; Hegel's *Philosophy of Right*.

The Examination will begin on Tuesday, 2nd October 1901. Names to be entered on or before 27th September.<sup>1</sup>

11. *Vans Dunlop Scholarship in Hebrew and Oriental (Semitic) Languages*, No. XXIX., page 185. The Competition will take place on Tuesday, 25th March 1902, and following days, beginning at 10 A.M. each day. Names to be entered on or before 15th March.

The following are the subjects of examination:—

(a) *Hebrew* (two papers).—Introduction to, and translation, criti-

<sup>1</sup> See footnote 1, p. 192.

cism, and exegesis of Psalms, Books II. and III., Hosea and Deuteronomy. Hebrew Grammar and Composition. Some of the passages set will be unpointed.

(b) *Syriac* (one paper).—Rödiger's *Chrestomathia Syriaca*, extracts I.-IV., VIII., IX.; St Mark's Gospel (Peshittà). Syriac Grammar and Composition.

(c) *Arabic* (one paper).—Bruennow's *Chrestomathy of Arabic Prose Pieces*, pp. 1-22, 44-55; *The Kor'ân*, third Sûra. Arabic Grammar and Composition.

12. *George Heriot's Travelling Scholarship for Teachers of Modern Languages*, No. XLI., page 188.

13. *Macpherson Scholarship*, No. XXXVII., page 187.

The subjects of Examination are: (1) *Tochmarc Etaine* and *Serglige Conculaind* (Windisch's *Irische Texte*). (2) *Modern Gaelic*: Duncan MacIntyre's Poems; Ossian's Fingal, Books I.-III.; and Keating's Three Shafts of Death, Books I., II., and III. (Atkinson's Edition). (3) Translations into English from Old and Modern Gaelic Authors. (4) Translation from English into Gaelic prose (Scottish or Irish). (5) A general knowledge of the History of Gaelic Literature, with more detailed knowledge of the Literature of the Scottish Highlands from A.D. 1560 to 1860. The Scholarship is awarded annually in April. Date to be afterwards announced. Names to be entered on or before 15th March.

14. *The George Scott Travelling Scholarship*, No. XXXVI., page 187. In 1902 the first preference will be given to a Candidate in the Group of English and Modern Languages. See Deed of Foundation in CALENDAR for 1897-98, page 419.

15. *Neil Arnott Scholarship for Experimental Physics*, No. XIX., page 181.

16. *The Mackay Smith Scholarship in Natural Philosophy*, No. XXXV., page 186. The Examination will take place at the same time as the Examination in Natural Philosophy for the ordinary Degree of M.A. (4th April 1902, from 9 to 11 and 11.30 to 1.30). Names of Candidates to be given in not later than 15th March.

17-19. *Three Ferguson Scholarships*, No. XX., page 181. Apply at the Office of the Ferguson Bequest Fund, 94 Bath Street, Glasgow, before 1st September.

20, 21. *Two Ritchie Scholarships*, No. XXXIX., page 188.

## Funds for Special Study or Research.

1. *The William Dickson Travelling Fund*, No. I., page 190.

2. *The Earl of Moray Bequest for the Promotion of Original Research* No. II., page 191.

## Prizes.<sup>1</sup>

1. The *Lord Rector's Prize*, of twenty-five guineas, for the best Essay on "South Africa, its past, present, and probable future." The Prize is open to Matriculated Students of the University at 1st November 1901, and to Graduates of not more than two years' standing. Essays to be lodged with the Secretary of Senatus on or before 1st November, each Essay distinguished by a motto, and accompanied by a sealed envelope containing the name, address, and University standing of the Candidate.

2. *Scott and Dunbar Prize*, No. V., page 175.

3. *Bruce of Grangehill and Falkland's Prize*, No. III., page 174.

4. The *Elizabeth Hamilton Prize* of £5 is offered to the best Woman Student in the Ordinary Class of Moral Philosophy who desires to study for Honours, provided that her standing be not below that of the First Class Certificate.

5. *Neil Arnott Prize*, No I., page 432.

6. *Cousin Prize in Fine Art*, No. VI., page 175.

7, 8, 9. The *Trustees of Gray's Prize Essay Fund* offer three Prizes of £15, £10, and £5 for the first, second, and third best Essays on "Evolution in its relation to Christianity." The Prizes are open annually to Matriculated Students of not more than three years' standing at the commencement of the Winter Session. Essays to be lodged with the Secretary to the Trustees not later than 1st September. No information beyond that which is conveyed in the notice on the Boards will be given. Rev. John Blackwood Munro, Duns, Secretary to the Trustees.

10, 11. *Two Newton Bursaries or Prizes*, No. LXIII., page 163, of about £22, 14s. 2d. each, tenable for two years, are awarded annually at the end of the Winter Session—one for proficiency in the Senior (Second) Class of Mathematics, and one in the Junior Class of Natural Philosophy.

12. The *Kelland Memorial Prize*, of about £4, 12s., will be awarded by Examination in October. The paper will be on the Higher Geometry for the John Welsh Bursaries (set on Saturday, 5th October, at 9 A.M.), with such additional questions as may be deemed necessary. Students who made a complete attendance on the Junior Mathematics Class for the first time in the previous Session (1900-1901) will alone be eligible to compete for the prize in October next. Names to be given in not later than 18th September.

13. The *Gladstone Memorial Prize*, No. VIII., page 176. Applications, with the necessary certificates, to be lodged with the Clerk of Senatus not later than 30th March.

14. The *Blackie Celtic Prize*, No. IX., page 176. The Examination for this prize of £50 will begin on 29th October at 11 o'clock.

<sup>1</sup> See footnote 2, p. 192.

Names to be entered at the Matriculation Office on or before 15th October.

15, 16. *The University Endowment Association* offer a Prize of £5 in the ordinary French Class, and a similar Prize in the ordinary German Class. Conditions to be afterwards announced.

## Bursaries.<sup>1</sup>

FOR STUDENTS ENTERING THEIR FIRST YEAR.

(*For Time-Table of Examinations, see pages 123-126.*)

Bursaries in Arts heretofore tenable for four years shall continue to be so tenable, provided that, if the holders graduate after three years, they shall only retain their Bursaries during a fourth year if they shall engage in study approved by the Senatus in subjects included in the Curriculum for Degrees in Arts or in Pure Science. Bursars in Arts, subject to the provision as to the fourth year of tenure, shall attend in each year at least two classes qualifying for Graduation in Arts, and shall duly perform the work of these classes: Provided (1) that, for the purposes of this section, the classes known as Middle Classes, so long as the same exist, may be attended in place of classes qualifying for Graduation; and (2) that it shall be in the power of the Senatus, with approval of the University Court, to permit such Bursars to attend classes qualifying for Graduation in Pure Science in place of classes qualifying for Graduation in Arts. [See Ordinance No. 57.]

The Bursaries are awarded on the results of the University Bursary Examinations unless otherwise stated, and are tenable at the University of Edinburgh only. The Senatus reserve the power, under Section VIII. of Ordinance No. 57, to award not more than two First Year Bursaries in Arts in respect of exceptional distinction in any one branch of study.

For Bursary and other purposes, where the phrase "First-year's Student in Arts or Pure Science" is not by Deed of Foundation or otherwise defined, it shall mean "A Student in Arts or Pure Science who has not attended any class qualifying for Graduation in the said Faculties in any Scottish University."

The Subjects of Examination for the first year Bursaries, Nos. 1 to 13 inclusively in the following list, are on the *Higher Standard* and are the subjects prescribed for the Preliminary Examination, viz.:—English (full marks 100), Latin (100), Greek (100), Mathematics (100), French (50), German (50), Italian (50), and Dynamics (50), with additional papers in English, Latin, Greek, Mathematics, French, and German. Candidates may select not more than five subjects; provided always that no Candidate will be credited with marks in any subject in which he has not obtained twenty-five per cent. of the total marks assigned to that subject. Those who select Latin, Greek, or Mathematics must for the

<sup>1</sup> See footnote 2, p. 192.

Bursary Competition take the papers on these subjects on the Higher Standard. The Examination Papers are indicated in the Time-Table of Examinations by the figure 1.

Candidates for *Preferential or Restricted* Bursaries [Nos. 14 to 19 inclusively] which are not awarded by open competition must present themselves for the Preliminary Examination in Arts prescribed by the Regulations for Degrees in Arts, Section III., and no Bursary shall, except as hereinafter provided, be awarded to any Candidate who shall not have passed the Preliminary Examination in Arts (or its equivalent). But it is in the power of the Senatus, with the approval of the University Court, to admit to a Bursary in Arts not awarded by open competition a Candidate who shall have passed in at least one subject of the Preliminary Examination, on the condition that he shall not retain the Bursary unless he shall have passed in all the subjects not later than the Second Preliminary Examination after the date of his admission as Bursar. When there are more than one eligible Candidate for a restricted or preferential Bursary [Nos. 14 to 19 inclusively], the Subjects of Examination are:—English (as for Arts and Science Preliminary), Lower Latin, Lower Greek, and Lower Mathematics. Candidates for the MacKinnon and Ardvorlich<sup>1</sup> Bursaries will in addition get Translation of an easy passage from Gaelic to English, Translation of Sentences from English to Gaelic, and Elementary Questions in Gaelic Grammar. The papers are indicated in the Time-Table of Examinations by the figure 3.

Candidates for Bursaries Nos. 1 to 20 inclusively may on and after 9th September obtain schedules at the Matriculation Office, University (Old) Buildings, which must be completed and returned to the Clerk of Senatus *on or before* 18th September. The Senatus may relax this Regulation in cases where very special cause has been shown.

*Town Council Bursaries.*—Candidates for Bursaries in the gift of the Town Council, a number of which are vacant, are referred to the "*City Clerk, Council Chambers, Edinburgh,*" to whom early application should be made. The Examination is the same as for the University Open Bursaries.

County Clubs, and others who prefer this examination, may, by arranging with the University Court, avail themselves of the University Examinations by giving written intimation of the names of their Candidates at the Matriculation Office not later than 18th September. Those who desire to have their Bursaries inserted in the CALENDAR, under the head of Bursaries open during the year, are requested to give intimation to the Editor of the CALENDAR before 1st January.

*County Club and Private Bursaries.*—Candidates for Bursaries instituted by various County Clubs are referred to the respective Secretaries of those Clubs. Information as to Private Bursaries may be obtained from the Patrons or from their Agents.

<sup>1</sup> Ardvorlich not open in 1901.



Candidates for Bursaries, unless also Candidates for the Preliminary Examination, pay no fee.

*The names of the successful Candidates, and of others distinguished in the ordinary Bursary competition, will be published, in the order of merit, in the University Calendar, along with the names of the schools from which they come, provided that they have matriculated and enrolled in the necessary classes for 1901-1902.*

# I. FIRST YEAR BURSARIES OPEN IN SEPTEMBER-OCTOBER 1901 THE EXAMINATION FOR WHICH IS ON THE HIGHER STANDARD.

1. *One John Welsh Classical Bursary*, of the annual value of £20, tenable for four years. Subjects of examination—Latin, Greek, English.

2. *One John Welsh Mathematical Bursary*, of the annual value of £20, tenable for four years. Subjects of examination—Mathematics, especially pure Geometry. (Candidates are recommended to read Macdonald's *Higher Geometry*, Wilson's *Solid Geometry and Conic Sections*, and Casey's *Sequel to Euclid*, as partly indicating the scope of the examination in Geometry. What will be looked for is, not so much exhaustive knowledge of all the more intricate theorems, as a thorough knowledge of such as are more elementary and fundamental in their character, and ability to apply these in fairly straightforward exercises.)

3. *Patrick Bursary*, of about £50 a-year, tenable for four years, for those who have completed their School Education at Ayrshire schools or academies where a course of Classical Study is pursued. The rectors or head teachers of each of said schools or academies may grant a certificate or letter to any number, not exceeding four, of the best scholars who have completed their course of education at such school or academy, and are in a position to enable them to apply for admission to the University; and those holding such letters or certificates are entitled to present themselves for examination as candidates for the Bursaries. Failing qualified candidates, the Senatus may award by open competition.

4-5. *Two Whitelaw Bursaries*, of about £23, 14s. 2d., tenable for three years.

6. *A Baxter of Balgavies Bursary*, of the annual value of £30, and tenable for three years, open both to men and women who have been educated in the High School of Dundee for at least one year immediately preceding the competition. The subjects of examination are the same as for the First Year Open Bursaries with the omission of Italian, and the addition of Chemistry (full marks 50) as a subject of examination. Candidates may select not more than five subjects, and the successful candidate may study for the Degrees of M.A., B.Sc., B.L., LL.B., or M.B., Ch.B.

7. *One Sibbald Bursary*, of the annual value of £30, tenable for three years. Apply to Messrs Mackenzie, Innes & Logan, W.S., 23 Queen Street, Edinburgh, before 15th September.

8. *Thomson Bursary*, £25 a-year, tenable for four years. Apply to Messrs Traquair, Dickson & Maclaren, W.S., 11 Hill Street, Edinburgh, before 15th September.

9. *One Mann Bursary*, of about £27, 13s. 4d. a-year, tenable for three years. Candidates must be sons of residents in the town of Nairn, *i.e.*, one or other of their parents must have resided within the municipal boundaries for at least twelve months at some period prior to the competition. Should there be no qualified Candidate of the first year for this Bursary, a notice will be posted at the College gate soon after the Bursary Competition. Other Preferential Candidates must then lodge their claims within one week after the notice appears on the Board.

10-11. *Two Jardine of Thorlieshope Bursaries*, each of the annual value of £35, tenable for four years. Open only to natives of the rural districts of Roxburghshire and Dumfriesshire (villages and towns with a population of 2000 and upwards being excluded) who have attended the Public or Board Schools in said Counties. The Bursars are required to attend the classes necessary for the Degree in Arts, and to take the Degree at the end of the course. In the event of there being no qualified First Year Student, the Bursary may be given to a Candidate of the previous year who does not hold a Bursary, or thrown open to competition for one year only to second, third, or fourth year Students in succession.

12. *Border Counties Association Bursary*, of £30 a-year, tenable for four years, open both to women and men who have attended any school in either of the Counties of Roxburgh, Berwick, Selkirk, or Borough of Berwick-on-Tweed for two complete sessions immediately prior to the time of the competition. The successful candidate must attend the classes necessary for a Degree in Arts. Apply to Mr T. Usher, Sheriff Court House, Edinburgh, before 15th September.

13. *One Grierson Bursary*, of £20 a-year, if not awarded to a Preferential Candidate. (See No. 16.)

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PREFERENTIAL OR RESTRICTED BURSARIES the examination for which (except in English) is on the lower standard.

14. *Mackinnon Bursary*, of about £20 a-year (under deduction of expenses), tenable for three years. Candidates must be natives of the Counties of Argyll, Bute, Inverness, Ross, or Sutherland, and must be examined in Gaelic.

15. *One Grierson Bursary*, of £20 a-year, tenable for four years—restricted in the first place to natives of the parishes of Crawford and Leadhills. If there be no Preferential Candidate, the examination will be as for Open Bursaries.

16. *The Penman Bursary*, of £14, 15s. a-year, tenable for four years. Bursar must attend the classes in the Arts curriculum. Patrons—Society for Benefit of Sons of the Clergy.

17. *Dundas Bursary*, of about £21 a-year, tenable for four years. It cannot be held along with any other Bursary in the University. Apply to Sir Robert Dundas, Bart., of Arniston, Gorebridge.

18. *Orkney and Zetland Bursary*, of the value of about £40 per annum, tenable for three years, is open for competition to First Year Students (male or female), natives, or children of parents one or both of whom have been born in or connected for a long period of years with the Islands of Orkney and Zetland. Examination as for Preferential Bursaries. The Bursar must attend the classes in the Curriculum with a view to a Degree in Arts. Apply to Messrs Dundas & Wilson, C.S., 16 St Andrew Square, Edinburgh, before 15th September.

19. *Lanarkshire (Upper Ward of) Bursary*, of £20 a-year, tenable for four years. Apply to Richard Brown, C.A., 23 St Andrew Square, Edinburgh.

20. *Renton Bursary* (not restricted to Students of the First Year), of about £20, for one year. The holder must attend one or more of the classes of Natural Philosophy, Mathematics, Chemistry, or Political Economy. Pecuniary circumstances will be taken into consideration. It cannot be held by anyone under the age of sixteen or above twenty-one, or with another Bursary of the annual value of £30 or upwards. The examination is in English and Mathematics, as for the First Year Open Bursaries. See Time-Table, page 124. Names of Candidates to be entered on or before 18th September.

21-22. *Two Newton Bursaries or Prizes*, of about £22, 14s. 2d. each, tenable for two years, are awarded annually at the end of the Winter Session—one for proficiency in the Senior (Second) Class of Mathematics, and one in the Junior Class of Natural Philosophy.

23. *Donald Fraser Bursary*, of £51, for high merit in the class of Natural Philosophy, combined with proficiency in Laboratory Work, is awarded annually at the end of the Winter Session.

24-30. *Six George Heriot Bursaries for Men* will be offered for Competition to Students matriculating at the University for the first time, after having passed the Preliminary Examination for a Curriculum in Arts or Science. Each Bursary is of the annual value of £30 a year, and may be tenable for three years. Subjects of examination:—(1) Latin; (2) Mathematics; (3) English; (4) Greek; (5) French; (6) German; (7) Italian; and (8) Dynamics, with additional papers in English, Latin, Greek, Mathematics, French, and German. Candidates may select not more than five subjects of examination. Two of these Bursaries shall be awarded specially for proficiency in Modern Languages. For the conditions upon which these Bursaries will be

awarded apply to the Governors of George Heriot's Trust. The examination papers are indicated by the figure 1 in the Time-Table of Examinations. Schedules of applications for these Bursaries may be had from the *Governors of George Heriot's Trust*, at the Office of the Treasurer, 20 York Place, Edinburgh, on and after 15th August, and must be returned to him not later than 15th September. Candidates are required to state in their schedules of application the subjects in which they offer themselves for examination.

31, 32. *Two Heriot High School Bursaries*, of £30 a year, open to pupils of the High School, Edinburgh, and tenable for three years. Subjects of Examination, &c., as for No. 24.

33-38. *Six George Heriot Bursaries for Women* will be offered for competition to Students matriculating at the University for the first time, after having passed the Preliminary Examination for a Curriculum in Arts or Science. Each Bursary is of the value of £30 a-year, and may be tenable for three years. Five of these Bursaries will be awarded specially for proficiency in Modern Languages. For the conditions upon which these Bursaries will be awarded apply to the Governors of George Heriot's Trust. The subjects and conditions of the examinations are the same as for the Bursaries for men. Application to be made in the manner referred to in No. 24. The examination papers are indicated by the figure 1 in the Time-Table.

39. *One George Heriot Bursary for Women* studying Medicine, for attendance at any School of Medicine for Women in Edinburgh recognised by the University Court. The Bursary is of the value of £30 a year, and may be tenable for three years. Candidates *must pass the Preliminary Examination of the University either in Arts or Science*. They may take as many subjects in addition to those qualifying for the Preliminary Examination as they please; but should they fail to secure 25 per cent. of the marks allotted to a subject the paper will be cancelled. Application to be made in the manner referred to in No. 24.

40-42. *Three George Heriot Bursaries for Women* of £30 each, and tenable for one year, at St George's Training College, Edinburgh, one of which is specially offered to Women-graduates. The subjects of examination for graduates are:—English (full marks 100), Latin (100), Greek (100), Mathematics (100), French (100), German (100). Candidates may select not more than three subjects; provided always that no Candidate will be credited with marks in any subject in which she has not obtained 25 per cent. of the total marks assigned to that subject. The papers to be taken are those set for first year open bursaries. The Examination Papers are indicated in the Time-Table of Examinations by the figure 1. Women-students who hold the Cambridge University Honour or Ordinary Certificates, which are equivalent to the degrees conferred on men-students, and women-students who hold the corresponding equivalents to degrees from the University of Oxford will rank for purposes of Competition as Graduates. The subjects of Examination for Non-

Graduates shall be selected from those specified for *the Preliminary Examination of the University in Arts or Science*. They may take as many subjects as they please; but should they fail to secure 25 per cent. of the marks allotted to a subject, the paper will be cancelled. The marks are as follows:—English, 100; Latin (Higher Grade), 100; Latin (Lower Grade), 50; Greek (Higher Grade), 100; Greek (Lower Grade), 50; Mathematics (Higher Grade), 100; Mathematics (Lower Grade), 50; French, 80; German, 80; Italian, 80; Dynamics, 50. No marks will be given for the lower paper in any subject where the higher paper in that subject is also taken. Applications for Schedules for these Bursaries may be made to the Governors of George Heriot's Trust at the Office of the Treasurer, 20 York Place, Edinburgh, on and after 15th August, and must be returned to him not later than 15th September.

43-45. *Two Simson Bursaries*, of the annual value of £25, tenable for three years, for Students who, having passed the Preliminary Examination, are entering on the first year of the course in Arts and are studying for the Ministry of the Church of Scotland. See definition of a First-year's Student, at page 196. *One Special Bursary* of £25 for one year, open to Students for the Ministry of the Church of Scotland who are attending Classes at the University with a view to passing the Preliminary Examination. The Examination for these three Bursaries will be held in the end of October. For further details and subjects of Examination apply to the Rev. G. T. Jamieson, Clerk to the Presbytery of Edinburgh, The Manse, Portobello.

46. *A Macdougall Bursary*, of £30 per annum, tenable for three years. Candidates must have been born within the County or City of Perth. Students attending the Gaelic Class preferred. It cannot be held with any other Bursary or appointment yielding together upwards of £50 per annum. Apply to W. Cochrane Young, Esq., Solicitor, Perth.

47-49. *Bursaries offered by The Edinburgh Association for the University Education of Women*—

(1) *The Victoria Jubilee Bursary*, founded by His Excellency Dr Gunning, of about £30 for one year, to be held at Masson Hall. Open to a third year Student desiring to graduate in Arts or Science with Honours.

(2) *The Earl of Zetland's Bursary*, about £20 for one year.

(3) *The Mair Bursary*, of about £20 for two years. Open to Candidates intending to follow a profession.

These Bursaries are offered to women Candidates. The Subjects of Examination for 2 and 3 are the same as for the University First Year Open Bursaries, see page 196. They cannot be held along with any other Bursary or Scholarship whatsoever, and will be awarded to such Candidates as in the opinion of the Executive Committee best fulfil the conditions of the several trusts.

Apply by letter to the Hon. Secretary of the Association, Miss



Louisa Stevenson, 13 Randolph Crescent, Edinburgh, for No. 1 before 15th February 1902, and for Nos. 2 and 3 before 15th September 1901.

50-53. *The Buchanan Society gives Four Bursaries annually* in Arts, Science, and Medicine, open to suitable young men of the names of Buchanan, M'Millan, M'Auslan, M'Wattie, and Risk, and tenable at any Scottish University. The Examination generally takes place in September, and the papers set are of equal value for full marks in all subjects. The four competitors who have the highest marks get the Bursaries, provided a satisfactory standard of proficiency is attained. They may therefore be given all in Arts, or Science, or Medicine. The Arts Bursaries are of the annual value of £20 each, tenable for three years. The Science Bursaries are of the annual value of £30 each, tenable for four years; and the Medical Bursaries are of the annual value of £35 each, and tenable for five years.

For rules and further particulars apply to P. G. KEYDEN, 186 West George Street, Glasgow, *Secretary*; or to George S. Buchanan, 85 Candleriggs, Glasgow, *Treasurer*.

54. *The M'Glashan Bursary, offered through Committee of St George's Classes*.—Bursary of £10 for one year, offered to the woman student who passes highest among members of the St George's Oral or Correspondence Classes completing the Arts Preliminary Examination in October. For further information apply to the Secretary, St George's Classes, 5 Melville Street, Edinburgh.

#### FOR STUDENTS ENTERING THE SECOND SESSION IN ARTS.<sup>1</sup>

*See Time-Table of Examinations, pages 123-125.*

1. *Tyndall Bruce Bursary*, £35 a year, for three years.
2. *Harrison Bursary*, about £26, 5s., for two years (under deduction of expenses).
- 3, 4. *Two Stuart Bursaries*, annual value £18 each, tenable for three years.

The subjects of examination are Latin, Greek, and Mathematics.

The following subjects are prescribed for the examination in Latin and Greek:—*Latin*—Virgil, *Georgics*, ii. and iv.; Tacitus, *Agricola* and *Histories*, i. *Greek*—Homer, *Odyssey*, xxii. and xxiii.; Soph., *Trachin.*; Thucyd., Bk. viii. Latin and Greek prose composition, and translation from books not prescribed.

Names of Candidates to be entered on or before 18th September.<sup>1</sup>

5. *Patterson Bursary in Anglo-Saxon*. See page 204.

Names of Candidates to be entered on or before 18th September.<sup>1</sup>

6, 7. *Two Spence Bursaries*, each of the annual value of £30 for first year and £40 for second year of tenure, open to Students of either sex who, after passing the Preliminary Examination or examina-

<sup>1</sup> See footnote 2, p. 192.

tion accepted as equivalent thereto, have attended one Winter Session qualifying for graduation or its equivalent, and who intend to complete the course of study for the Degree of M.A. The Governors may award to any Bursar, if they shall be satisfied of his or her merit, a continuation Bursary of £50, tenable one year, on condition that the Bursar shall for that year attend such a Curriculum of study in any of the Faculties as the Governors may approve. The next examination will take place at St Andrews in September or October 1901. Apply to Mr Henry A. Pattullo, Solicitor, 1 Bank Street, Dundee, Factor to the Trust, for particulars. Schedules of application duly filled up, to be lodged on or before 1st September.

FOR STUDENTS ENTERING THE THIRD SESSION IN ARTS.<sup>1</sup>

*See Time-Table of Examinations, pages 123-126.*

1. *Horsliehill Scott Bursary*, of about £33, for two years (under deduction of expenses).

The subjects of examination are Classics, Mathematics, and Logic (with Psychology and History of Philosophy).

The following subjects are prescribed for the examination in Classics:—*Latin*—Virgil, *Georgics*, iv. ; Horace, *Satires*, ii. ; Tacitus, *Agricola*. *Greek*—Soph., *Trachin.*; Thucyd., Bk. viii. Latin and Greek prose composition and translation from books not prescribed.

No special books prescribed for Mathematics, or for Logic with Psychology and History of Philosophy. Candidates should revise the lectures and text-books in these classes.

2. *Patterson Bursary in Anglo-Saxon Grammar and Literature*, of £16, 2s. 4d. a year, tenable for two years, and open to all students in their second, third, or fourth year of Matriculation who have attended the Class of English Literature. The holder must produce a Certificate of attendance on the Honours Course in English Language in the First Session after his appointment. The Examination will be on—

- (1) *Literature*.—The Class Lectures; Ten Brink's *Early English Literature*, Vol. I., Bk. i., transl. by Kennedy; Stopford Brooke's *History of Early English Literature* (i. and ii.).
- (2) *Language*.—Old English Grammar, as treated in Sievers's *Old English Grammar*, ed. Cook; the "Grammatical Introduction" to Sweet's *Old English Reader* (Clar. Press); Morris and Kellner's *Historical Outlines of English Accidence*; and Kellner's *Historical Outlines of English Syntax*.
- (3) *Prescribed Readings*.—*The Chronicle*, A.D. 890-1001, in the Parker Text (ed. Plummer); selections from Ælfred's "Orosius," Ælfred's "Beda," and Ælfric's "Life of King Oswald," printed in Sweet's *Old English Reader*; *The Wanderer* (Grein, ed. Wülcker, I., p. 284; Sweet's *Reader*,

p. 177); *Beowulf*, l. 1251—l. 1887, *Sizon þa to slæpe.*  
. . . se þe oft maneꝰum scod (Grein, ed. Wülcker, I.,  
pp. 159-219).

(4) An unseen passage for translation into modern English.

Names of Candidates to be announced at the *Matriculation Office, University, Edinburgh*, not later than the 18th September 1901.

The attention of all Bursars in the Faculty of Arts is particularly called to the following regulation:—

“Bursars in the Faculty of Arts (to whose Bursaries special conditions are not attached) must annually attend at least two of the Classes necessary for the Degree of Master of Arts, and must present themselves at the Examinations necessary for that Degree.

“Each Fellow, Scholar or Prizeman, when he applies to the Factor for payment, must produce a Certificate signed by the Dean, or the Professor to whose department the Foundation is attached, attesting his regular attendance on the proper Classes, etc., or otherwise that he has fulfilled the conditions attached to the Foundation.”

Certificates, in terms of this regulation, will be given to Bursars, by the *Dean of the Faculty of Arts*, after 14th November, and at the end of the Session. In applying to the Dean for the Certificate in November, Bursars must present their Class Cards for the Session; and at the end of the Session they must present certificates from the Professors that they have attended with regularity and made progress in their studies. Payments are made by the University Factor, Mr Henry Cook, W.S., 61 North Castle Street, Edinburgh, on and after 14th November for the Martinmas payments, and on and after 19th May for the Whitsunday payments,—between 10 and 3 o'clock.

N.B.—*Bursars, Scholars, and Fellows who desire to resign should at once announce this to the Factor. They must apply to the Factor for the instalments due to them within three months after they have become payable, otherwise they will be regarded as having resigned.*

G. CHRYSTAL, LL.D.,  
*Dean of the Faculty of Arts, and*  
*Professor of Mathematics.*

# Faculty of Science.

Dean—PROFESSOR GEIKIE, D.C.L., LL.D.

*Students who do not intend to graduate may attend any of the Classes on payment of the Matriculation and the Class Fees, without having passed any Preliminary Examination. Attendance on any Class with a view to Graduation in Pure Science will not qualify unless the whole Preliminary Examination has been previously passed. Those who intend to graduate in Engineering or in Agriculture must pass the Preliminary Examination before they present themselves for any part of the First Science Examination, but not necessarily before entering on the Curriculum. The Classes in the Faculty, except a few in which arrangements have not yet been made, are now open to women.*

## Programme of Classes.

### WINTER SESSION, 1901-1902.

*The Classes meet daily (Saturdays excepted), unless otherwise stated:—*

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees. <sup>1</sup>
Junior Mathematics...	15 Oct., 12 o'cl.	Prof. Chrystal	£3 3
Senior Mathematics <sup>2</sup> ..	15 Oct., 9 „		3 3
Mathematics (Intermediate Honours) }	16 Oct., 11 „		3 3
Do. (Advanced Honours)..... }	16 Oct., 10 „		3 3
Zoology (Elementary)	15 Oct., 2 „	Prof. Ewart .....	4 4
Practical Zoology (Elementary)..... }	15 Oct., 11 „		2 2 <sup>3</sup>
Advanced Zoological Laboratory <sup>4</sup> .. }	... ..		...
Morphology of Vertebrates (with Laboratory work) }	16 Oct., 2 „		3 3 <sup>3</sup>
Comparative Embryology..... }	8 Jan., 1 „	J. Beard, D.Sc...	3 3 <sup>5</sup>

<sup>1</sup> Fees for second and subsequent attendances, see page 210.

<sup>2</sup> The first half up to Christmas qualifies as a First Half-Course, and the second half from Christmas to the end of the Session as a Second Half-Course. *Any* First Half-Course, along with *any* Second Half-Course, taken subsequently, qualifies as a full Course for Graduation.

<sup>3</sup> Besides charge of 10s. for Laboratory Expenses.

<sup>4</sup> For Fees, see footnote 1, page 212.

<sup>5</sup> Five Shillings University Entrance Fee for non-matriculated Students. Payment of the Entrance Fee does not entitle the student to a Class Certificate, nor confer any other University privilege.

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees. <sup>1</sup>	
Botany (Advanced) ...	15 Oct., 11 o'cl }	Prof. B. Balfour {	£3 3 <sup>2</sup>	
Prac. Bot. (Advanced)	16 Oct., 11 ,, }		2 2 <sup>2</sup>	
Plant Physiology .....	15 Oct., 10 ,, }	{ A. W. Borth- wick, B.Sc...	2 2 <sup>2</sup>	
Natural Philosophy...	15 Oct., 11 ,, }			
Do. (Advanced)	23 Oct., 12 ,, }	Prof. ....	{ 3 3	
Honours).....			{ 3 3	
Physical Laboratory .	21 Oct., 10 ,, }	{	{ 2 2	
Natural Philosophy	16 Oct., 9 ,, }		{ Cargill G. Knott, D.Sc.....	{ 3 3
(Intermediate Honours Course)				
(Mon., Wed., Fri.)				
Dynamics (Advanced Science Course)	16 Oct., 10 ,, }	{	{ 3 3	
(Mon., Wed., Fri.)				
Chemistry .....	15 Oct., 10 ,, }	Prof. Crum Brown	{ 4 4	
Practical Chemistry...	25 Nov., 11 & 2,, }		{ 3 3	
Chemistry (Ad- vanced Course) ..	7 Jan., 4 ,, }		{ 2 2	
(Tu. Wed. & Th)				
Chemical Laboratories <sup>3</sup>	15 Oct., 9.30 ,, }		{ ...	
Astronomy (Mon., Tues. Wed. Thurs.)	16 Oct., 4 ,, }	Prof. Copeland..	{ 3 3	
Anatomy .....	15 Oct., 1 ,, }	Prof. Sir William Turner, K.C.B.	{ 4 4	
Practical Anatomy...	1 Oct., daily. }		{ 3 3	
Regional Anatomy	16 Oct., 9 o'cl. }	{ David Hepburn, M.D.....	{ 2 2 <sup>4</sup>	
(Anatomical De- monstrations).....				
Physiology .....	15 Oct., 2 ,, }	Prof. Schäfer, Dr Milroy and assistants .....	{ 4 4	
Pract. Physiology:—	16 Oct., 10-12 ,, }		{	{ 2 2
Experimental.....				
Chemical .....	16 Oct., 9-10 ,, }		{ 1 1	
Adv. Pract. Physiol. (Experi. & Chem.) <sup>5</sup>			{ 3 3	
Geology & Mineralogy	15 Oct., 4 ,, }	Prof. Geikie.....	{ 4 4	
Prac. Class <sup>6</sup> (Mon., Wed., & Fri.) ...}	18 Oct., 2-4 ,, }		{ 3 3 <sup>6</sup>	
Engineering .....	1 Nov., 9 ,, }	Prof. Beare.....	{ 4 4	
San. Eng. & Build. Constr. relative to Pub. Health...	5 Nov., 10 ,, }		{ 2 2	

<sup>1</sup> Fees for second and subsequent attendances, see page 210.

<sup>2</sup> Besides Garden Fee of Five Shillings.

<sup>3</sup> For fees, &c., see footnote 2, page 212.

<sup>4</sup> When taken along with Practical Anatomy, £1, 1s.

<sup>5</sup> Dates to be arranged.

<sup>6</sup> First part of this Course up to Christmas qualifies as a Half-Course for Graduation in Arts. Fee, £2, 2s.



Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees. <sup>1</sup>
Public Health and Sanitary Science )	<i>In Summer only.</i>	Prof. Hunter	£4 4
Do. Laboratory.....	15 Oct., <i>daily.</i>	Stewart .....	10 10 <sup>2</sup>
Engineering (short additional Course: Applied Mech.)... )	15 Oct., 9 o'cl.		1 1 <sup>3</sup>
Geomet. and Mech. Drawing.....	1 Nov. 10 to 2 ,,	W. Hume Kerr, M.A., B.Sc....	3 3
Lectures ( <i>Mon., Th.</i> )	18 Nov., 12 ,,		
Drawing in its relation to Public Health.....	4 Nov., 11 ,,		2 2
Agriculture and Rural Economy.. )	17 Oct., 9 ,,		4 4
Garton Lectures on Colonial Agriculture ( <i>Mon., Thur.</i> )	17 Oct., 12.30 ,,	Prof. Wallace ..	1 1 <sup>4</sup> 6
Economics as applied to Agriculture ( <i>The Political Economy Class in Arts till Christmas</i> ) .....	15 Oct., 5 ,,	Prof. Nicholson	2 2
Agricul. Chemistry )	15 Oct., 3 ,,	A. P. Aitken,	3 3
Do. Advanced Laboratory Class.. )	15 Oct., 12-4 ,, ( <i>Tu. &amp; Fri.</i> )	D.Sc.....	4 4 <sup>5</sup>
Forestry .....	15 Oct., 10 ,,	Col. Bailey, R.E.	3 3 <sup>6</sup>
Agricultural Entomology (Twenty Lectures).....	7 Jan., 2 ,,	W. Fream, LL.D., B.Sc. (Lond.)	2 2 <sup>4</sup> 5

## SUMMER SESSION, 1902.

*The Classes meet daily (Saturdays excepted), unless otherwise stated.*

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees. <sup>1</sup>
Senior Mathematics (First Graduation Half-Course) <sup>7</sup> .....	1 May, 11 o'cl.	Chas. Tweedie, M.A., B.Sc.	£ s. 2 2
Senior Mathematics (Second Graduation Half-Course) <sup>7</sup> .....	1 May, 12 ,,		2 2

<sup>1</sup> Fees for second and subsequent attendances, see page 210.

<sup>2</sup> Fee for Summer Session, £6, 6s.

<sup>3</sup> No Fee for Students of class of Systematic Engineering.

<sup>4</sup> Free to all present and past Students of the Agriculture Class.

<sup>5</sup> On payment of this fee, students who have already attended the Ordinary Class will be readmitted to that class.

<sup>6</sup> See footnote 5, page 206.

<sup>7</sup> For Regulations as to Half-Courses, see footnote 2, page 206.

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees. <sup>1</sup>
Honours Mathematics (Graduation Half-Course).....	1 May, 10 o'cl.	Chas. Tweedie, M.A., B.Sc.	£ 2 s. 2
Physics ( <i>mainly for Students of Medicine</i> )	1 May, 12 „	Prof.	3 3
Physical Laboratory ...	1 May, 10 „	{ Prof. and Assistant.....	2 2
Elementary Dynamics	1 May, 9 „	C. G. Knott, D.Sc.	2 2
Advanced Experimental Physics.....	1 May, 10 „	W. Peddie, D.Sc.	2 2
Chemistry (Organic)	1 May, 1 „	{ Prof. Crum Brown.....	2 2
Do. (Practical).....	1 May, 2 „		3 3
Chemical Laboratories <sup>2</sup>	1 May, 9.30 „		...
Chemical Theory ( <i>Mon. &amp; Fri.</i> ) .....	2 May, 10 „	{ Leonard Dobbin, Ph.D. ....	1 1
Mineralogy and Crystallography .....	2 May, 9 „	{ Hugh Marshall, D.Sc. ....	2 2
Astronomy (Advanced) ( <i>Tues. &amp; Fri.</i> ).....	2 May, 11 „	Prof. Copeland...	2 2
Practical Anatomy.....	1 May, <i>daily</i> .	Prof. Sir W. Turner, K.C.B., and Demonstrators .....	2 2
Anthropology.....	7 May, 1 o'cl.	{ David Hepburn, M.D. ....	2 2 <sup>3</sup>
Regional Anatomy (Anatomical Demonstrations).....	1 May, 9 <i>daily</i> .		...
Pract. Physiol. (Histol.)	{ 1 May, <i>several hours</i> .	Prof. Schäfer,	2 2
Adv. Pract. Phys. (Histol.) <sup>4</sup> .....		{ Dr Milroy and assistants	2 2
Geology ( <i>Mon., Wed., Fri.</i> ).....	2 May, 4 o'cl.	{ Prof. Geikie, ...	3 3 <sup>4</sup>
Field Demonstrations on <i>Saturdays</i> .	... ..		...
Petrology ( <i>Mon., Wed., Fri.</i> ).....	2 May, 10-12 „	{ J. D. Falconer, M.A., B.Sc..	2 2
Zoology (Elementary).	1 May, 12 „	{ Prof. Ewart.....	4 4
Do. (Elementary Practical).....	1 May, <sup>6</sup> „		2 2 <sup>5</sup>

<sup>1</sup> Fees for second or subsequent attendances, see page 210.

<sup>2</sup> For Fees, &c., see footnote 2, page 212.

<sup>3</sup> When taken with Practical Anatomy, £1, 1s.

<sup>4</sup> This Course qualifies as a Half-Course for Graduation in Arts.

<sup>5</sup> Besides charge of 10s. for Laboratory Expenses.

<sup>6</sup> At hours to be arranged.

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees. <sup>1</sup>
Natural History Laboratory.....	} 1 May, 2 o'cl.	} Prof. Ewart.....	£ 5.
Invertebrate Zoology ..			6 6
Do. (with Lab. Work)	} 1 May, <sup>4</sup> "	} J. H. Ashworth, D.Sc.....	2 2
Botany .....			3 3 <sup>2</sup>
Practical Botany.....	1 May, 8 "	} Prof. Bayley	4 4 <sup>3</sup>
Field Demonstrations on Saturdays	1 May, 9 "		2 2 <sup>3</sup>
	} ... ..	} Balfour.....	...
Plant Physiology .....			...
Engineering Field- Work (Surveying, Levelling, &c.).....	1 May, 2 "	{ A. W. Borth- wick, B.Sc.	2 2 <sup>3</sup>
Public Health and Sanitary Science.....	11 June, 9.30,,		3 3
Do. Laboratory.....	1 May, 3 o'cl.	{ Prof. Hunter	4 4
	1 May daily.		6 6

## FEEES FOR SECOND OR SUBSEQUENT ATTENDANCES.

1. *Lecture Courses*, which qualify alike for Graduation in Science and Medicine: Second attendances on £4, 4s. Courses, £3, 3s.; on £3, 3s. Courses, £2, 2s.; subsequent attendances free: second attendances on £2, 2s. Courses, no reduction; third or subsequent attendances, £1, 1s. Perpetual Tickets for initial payment, £6, 6s. No reduction for re-attendances on Practical Classes or Laboratories.

2. *Lecture Courses* which qualify both for Arts and Science: Second attendances on £4, 4s. Courses, £3, 3s.; third or subsequent attendances, £1, 1s.; second attendances on £3, 3s. Courses, £2, 2s.; third or subsequent attendances, £1, 1s.; second attendances on £2, 2s. Lecture Courses (not being Honours Half-Courses for M.A.), £1, 11s. 6d.; third or subsequent attendances, £1, 1s.; Lecture Courses, when fee for first attendance is less than £2, 2s., no reduction. Full Courses (being also Honours Courses for M.A.), second attendances, no reduction; third or subsequent attendances, £2, 2s.; second attendances on £2, 2s. Courses (being also Half-Honours Courses for M.A.), no reduction; third or subsequent attendances, £1, 1s.

3. *Lecture Courses* not included in the curricula in Arts or Medicine: Second attendances on £3, 3s. Courses, no reduction; third or sub-

<sup>1</sup> Fees for second or subsequent attendances, see above.

<sup>2</sup> Besides charge of 10s. for Laboratory Expenses.

<sup>3</sup> Besides Garden Fee of 5s.

<sup>4</sup> Hours to be afterwards fixed.

sequent attendances, £2, 2s. ; on £2, 2s. Courses, second attendances, no reduction ; third or subsequent attendances, £1, 1s. On Agriculture and Rural Economy, second attendance, £3, 3s. Perpetual Ticket by initial payment, £6, 6s.

4. *Courses in Engineering and Drawing.* No reduction for second or subsequent attendances.

5. *Practical Classes and Laboratory Courses.* No reduction for re-attendances.

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MATRICULATION FEES, &c. Pages 27-29.

ENTRANCE FEE. See page 29.

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CLASS SESSIONS.

There are Two Sessions in each year, viz. :—

I. The Winter Session, which opens on 15th October 1901, and closes on 27th March 1902. Practical Anatomy begins on 1st October. Courses in the Faculty of Medicine which qualify for Graduation in Science close on 21st March. The Practical Anatomy Rooms remain open till the end of March.

The Classes meet for the last time before the Christmas Vacation on Friday, 20th December 1901, and re-assemble on Tuesday, 7th January 1902.

II. The Summer Session opens on the 1st May, and closes on the 16th of July 1902. The Practical Anatomy Rooms remain open till the end of July.

The Graduation Ceremonials take place on Friday, 11th April, and Saturday, 26th July 1902.

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The following means are afforded for Practical Instruction:—

I. LABORATORIES.

PHYSICAL LABORATORY, affording Students a practical knowledge of the construction and use of physical apparatus, and the mode of conducting experimental inquiries, daily from 10 to 3, under the Professor.

GEOLOGICAL AND PETROLOGICAL LABORATORY, for practical instruction in the study of Minerals, Rocks, and Fossils, and the methods of plotting and drawing geological maps and sections, on Monday, Wednesday, and Friday from 2 to 4, under the Professor, assisted by J. D. Falconer, M.A., B.Sc.

ENGINEERING DRAWING CLASS ROOM, daily during the Winter Session, from 10 to 2, for instruction in drawing and drawing-office routine.

THE ENGINEERING (FULTON) LABORATORY, open on fixed days during the Winter Session, for practical instruction in the processes employed by the Engineer in the Experimental Determination of the

Physical and Economical Constants of Materials, Machines, and Prime Movers, and in the Practical Applications of Electricity.<sup>1</sup>

PRACTICAL INSTRUCTION IN OFFICE AND FIELD-WORK, daily, in connection with the Summer Course on Surveying, Levelling, &c., from 11 to 4.

AGRICULTURE DEPARTMENT in the Museum of Science and Art, open daily to Students attending the Agriculture Class. Excursions to farms are made on Saturdays. The leading agricultural newspapers are left for the use of Students in the Agriculture Lecture Room.

ROYAL OBSERVATORY, open to Students of Astronomy on Friday evening, from 8 P.M.

ROYAL BOTANIC GARDEN LABORATORY at the ROYAL BOTANIC GARDEN, open daily for the practical study of plants and for research, under the Professor, assisted by L. Lewton Brain, B.A., and A. W. Borthwick, B.Sc.

PHYSIOLOGICAL LABORATORY, for Physiological Research, and the study of Practical Physiology, open daily, under the Professor, assisted by T. H. Milroy, M.D., B.Sc.; P. T. Herring, M.D.; John Malcolm, M.D.; and Sutherland Simpson, M.B., Ch.B., B.Sc.

The CHEMICAL LABORATORIES (distinct from the Practical Chemistry Class Room) have accommodation for forty Students. They contain the necessary equipment for a complete course of instruction in the various branches of Chemical Work and for Research. The instruction given includes Complex Qualitative Analysis, Quantitative, Inorganic, and Organic Analysis (with special courses in Gas Analysis, Assaying, &c.), and Chemical Preparations. The training is suited not only for Students studying for Science and Arts Degrees, or for the Examinations of the Institute of Chemistry, but also for persons desiring to qualify themselves as Analysts, Technical Chemists, &c. The Chemistry Department will be closed on 21st March and 16th July for the Winter and Summer Sessions respectively.

The Laboratories<sup>2</sup> are open from 9.30 to 4.30 daily, during the Winter and Summer Sessions, and are under the charge of Professor Crum Brown, assisted by Leonard Dobbin, Ph.D.; Hugh Marshall, D.Sc.; J. P. Longstaff; and James Kerr, B.Sc.

DISSECTING ROOMS, open daily under Professor Sir William Turner, K.C.B., assisted by David Hepburn, M.D.; David Waterston, M.B., C.M.; and other assistants. Open 1st October 1901 and 1st May 1902, and continue open till the end of March and end of July for the Winter and Summer Sessions respectively.

NATURAL HISTORY LABORATORIES,<sup>1</sup> for research and for study of

<sup>1</sup> Fees—Winter Session, £10, 10s.; Summer Session, £6, 6s.

<sup>2</sup> Fees for Chemical Laboratory.—*Whole-day*—Winter Session, £10, 10s.; or Oct.-Dec., or Jan.-March, or Summer Session, £5, 5s. *Half-day*—Winter Session, £6, 6s.; Oct.-Dec., or Jan.-March, or Summer Session, £3, 3s. Preference will be given to Students in the above order. Students who are not Matriculated may attend the Chemical Laboratory on payment of the entrance fee of 5s. in addition to the Laboratory fees.



the structure and development of Invertebrate and Vertebrate forms, open daily, under the Professor, assisted by J. Beard, D.Sc.; and J. H. Ashworth, D.Sc.

PUBLIC HEALTH LABORATORY, for Laboratory Work for Candidates for qualifications in Public Health and for Hygienic investigation, comprising a Chemical, a Bacteriological, and a Meteorological Department, open daily, under the Professor, assisted by J. Buchanan Young, M.B., D.Sc. Open 15th October 1901 and 1st May 1902.<sup>1</sup>

II. MUSEUMS. See pages 55-57.

## Courses of Lectures.

1901-1902.

### I.—PURE SCIENCE.

#### I. MATHEMATICS.

PROFESSOR CHRYSTAL.

CHARLES TWEEDIE, M.A., B.Sc., *Lecturer.*

For Synopses of Lectures, see under Faculty of Arts.

#### II. ZOOLOGY, including COMPARATIVE ANATOMY.

PROFESSOR EWART.

For Synopses of Lectures on Zoology and of Courses on Practical Zoology, see under Faculty of Medicine.

#### COMPARATIVE EMBRYOLOGY.

J. BEARD, D.Sc., *Lecturer.*

The Course consists of Lectures and Practical Work.

*Lectures.*—The following subjects will be dealt with:—Conjugation and sexual reproduction, the maturation, &c., of the egg and spermatozoan, the modes of formation of the germinal layers in a series of selected types, the development of Scyllium or Raja, Amphioxus and Rana as a basis for general Vertebrate Embryology, the organogeny of the chief systems of organs in the Vertebrata, the evolution and comparative development of the

<sup>1</sup> Fees—Winter Session, £10, 10s.; Summer Session, £6, 6s.

placenta. A few lectures will be given on the general principles and theory of Comparative Embryology, the recapitulation theory, and the nature of larval forms.

*Practical Work.*—Each member of the Class will have an opportunity of preparing for himself and studying a series of preparations to illustrate the development of *Salmo*, *Rana*, *Gallus*, and other forms. In addition, an extensive series of preparations of *Raja*, *Scyllium*, *Torpedo*, and *Lacerta*, &c., and of certain Invertebrate forms will be available.

In the Laboratory Work members of the Class may confine their studies to one particular type, or to some selected branch, such as Mammalian Embryology.

*Books for reference.*—Marshall's "Vertebrate Embryology"; Hertwig's "Embryology of Man and the Higher Vertebrates"; Korschelt und Heider's "Vergleichende Embryologie der Wirbellosenthiere"; and E. B. Wilson's "The Cell."

#### MORPHOLOGY OF THE VERTEBRATA.

A Course of twenty-five Lectures on the Morphology of the Vertebrata; the nervous system and its sense organs and the genito-urinary system receiving particular attention.

As far as time permits the question as to the morphological nature of the vertebrate head and skeleton will be discussed.

#### III. BOTANY.

PROFESSOR BAYLEY BALFOUR.

##### *Winter Session, 1901.*

*Lectures.*—A Course of advanced lectures and advanced work in the Botanical Laboratory is provided for.

##### *Summer Session, 1902.*

This Course is the same as for Students of Medicine with additional Laboratory work.

#### PLANT PHYSIOLOGY.

A. W. BORTHWICK, B.Sc., *Lecturer.*

A Course of Lectures and Practical Demonstrations will be given at the Royal Botanic Garden in the Winter and the Summer Sessions.

IV. NATURAL PHILOSOPHY.

PROFESSOR

C. G. KNOTT, D.Sc., *Lecturer on Applied Mathematics.*

ELEMENTARY DYNAMICS.

C. G. KNOTT, D.Sc., *Lecturer.*

ADVANCED EXPERIMENTAL PHYSICS.

WILLIAM PEDDIE, D.Sc., *Lecturer.*

For Synopses of Courses, see under Faculty of Arts.

V. CHEMISTRY.

PROFESSOR CRUM BROWN.

For Synopses of Courses, see under Faculty of Medicine.

ORGANIC CHEMISTRY.

This Class meets daily during the Summer Session at 1 P.M.

ADVANCED CHEMISTRY.

Course of twenty-five Lectures to begin after Christmas. Subject for 1901-1902, "Solution and Electrolysis."

CHEMICAL THEORY.

LEONARD DOBBIN, PH.D., *Lecturer.*

The subjects will vary from year to year. They will include historical matters, and discussions of the more important chemical theories which are at present productive or which have been superseded. The Class will meet on Mondays and Fridays at 10 A.M., during the Summer Session. The Subject proposed for 1902 is, "Some Chemical Theories of the Eighteenth and Nineteenth Centuries."—Fee, £1, 1s.

MINERALOGY AND CRYSTALLOGRAPHY (ADVANCED).

HUGH MARSHALL, D.Sc., *Lecturer.*

Daily, at 9 A.M., beginning Wednesday, 1st May. Fee, £2, 2s. The earlier part of the Course will be on Physical Crystallography generally, including the optical and other properties of

crystalline substances and the geometrical properties of crystals. The latter part will deal specially with those portions of Systematic Mineralogy not included in the earlier section, and with the Descriptive Mineralogy of minerals which are important from a geological or a chemical point of view. Some of the meetings will be devoted to Elementary Practical Work and Demonstrations.

#### VI. ASTRONOMY.

PROFESSOR COPELAND.

For Synopsis, see under Faculty of Arts.

An Advanced Practical Course, consisting of thirty meetings of two hours each, may be held in Summer.

#### PRACTICAL ASTRONOMY (ADVANCED SUMMER CLASS).

This Class will only be held if a sufficient number of Students present themselves. It will meet at the Royal Observatory, Blackford Hill, on Tuesdays and Fridays in the Summer Session. Evening hours will also be arranged to suit the progress of the work.

#### VII. HUMAN ANATOMY, including ANTHROPOLOGY.

PROFESSOR SIR WILLIAM TURNER, K.C.B.

For full Synopsis of Lectures on Anatomy and for Course of Practical Anatomy, see under Faculty of Medicine.

#### ANTHROPOLOGY.

If a sufficient number of Students express their intention of selecting Human Anatomy, including Anthropology, as a subject for the Degree of B.Sc., the Professor of Anatomy will deliver, during the Summer Session, a course of twenty-five Lectures on Physical Anthropology. Fee, £2, 2s. ; or for Students who take the Summer Course of Practical Anatomy, £1, 1s.

#### VIII. PHYSIOLOGY.

PROFESSOR SCHÄFER.

For Synopsis of Lectures, and Elementary Courses of Practical Physiology and Histology, see under Faculty of Medicine.

ADVANCED PRACTICAL PHYSIOLOGY.

This Course is devoted to Experimental and Chemical Physiology and Histology of a more advanced nature than that of the ordinary course of Practical Physiology. It is assumed that those who propose attending this Course have already attended the Elementary Course (*or*, a similar Course elsewhere) and the Lectures. The Course is divided into three parts, viz., (1) Experimental, (2) Chemical, (3) Histological. All three parts are taken in the Winter Session, and occupy six hours a week.

This Course is adapted for those preparing for examinations in Natural Science and Honours Examinations in Physiology, and for those who may afterwards desire to prosecute Physiological Research.

IX. GEOLOGY, including MINERALOGY.

PROFESSOR GEIKIE.

*Winter Course.*

I. CLASS OF GEOLOGY AND MINERALOGY.—Daily, at 4 o'clock. The Course embraces :—

1. *The History of Geology*—An outline of the growth of the science from the time of the early cosmogonies downwards.

2. *Dynamical Geology*—A discussion of the nature and causes of geological changes effected on the surface and within the interior of the earth.

3. *Mineralogy*—An account of the physical and chemical characters of minerals, and a description of some of the more important and typical species in the various mineral groups.

4. *Petrology*—A description of the various families of rocks.

5. *Structural Geology*—A description of the geological structure and relations of rock-masses to each other.

6. *Palaeontological Geology*—An account of the nature and use of fossils in geological inquiry.

7. *Palaeontology*—A description of the more important types of life represented by fossils.

8. *Historical Geology*—The history of the successive geological periods.

9. *Physiographical Geology*—An inquiry into the origin of the present outlines of the earth's surface.



[*N.B.*—For Arts Students a course of ten laboratory demonstrations of two hours each forms part of the ordinary Winter Course. They must also attend the Field Demonstrations.]

*Text-Books*—"Outlines of Geology," by the Professor (*Stanford*); Hatch's "Mineralogy" (*Whittaker*); Hatch's "Petrology" (*Sonnenschein*) or Harker's "Petrology for Students" (*Cambridge University Press*). More detailed works of reference, most of which are in the College Reading-Room, are recommended for each branch of the lectures.

II. CLASS OF PRACTICAL MINERALOGY AND GEOLOGY.—Two hours (2 to 4), on Mondays, Wednesdays and Fridays, under superintendence of the Professor. This Course, up to Christmas, is a Half-Course qualifying for Graduation in Arts.

III. FIELD DEMONSTRATIONS.—Short excursions are made on Saturdays to places of geological interest near Edinburgh, when the Class Lectures are illustrated by demonstrations in the field, and practical instruction is given in Geological Surveying.

These Field Demonstrations are open to Students attending either the Class Lectures or the Practical Class.

Adjoining the Class-room is a small Museum exhibiting the characters of minerals and rocks, and the typical fossils of the different geological systems.

#### *Summer Course.*

The following subjects are dealt with in this Course :—

1. *Petrology*.—(The lectures are illustrated by demonstrations in the Laboratory and the Class Museum.)

2. *Palæontological Geology*.—(Class Museum, see above.)

3. *Structural Geology*.—Under this head *Dynamical Geology* is also discussed in more or less detail.

4. *Geological Surveying*.

5. *Economic Geology: application of Geology to Mining, Engineering, Agriculture, Public Health, &c.*

6. *Physiographical Geology*.

*Structural and Field Geology* form the principal portion

of this Course, but no previous knowledge of Geology is required of the student—the elementary principles of the science being set forth both in the lecture-room and the field. The Class meets on Mondays, Wednesdays, and Fridays at 4, and a series of practical lessons on the study of rocks will be given at the beginning of the Session on Tuesdays and Thursdays at the same hour. The Saturdays are devoted to field demonstrations, when the mode of geological mapping and section drawing is explained and illustrated. This Course is a Half-Course qualifying for Graduation in Arts.

PETROLOGY.

J. D. FALCONER, M.A., D.Sc., *Lecturer.*

Lectures and Practical Work, on Mondays, Wednesdays, and Fridays, from 10 to 12, in Summer.

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I.—APPLIED SCIENCE.

I.—ENGINEERING.

I. MATHEMATICS.

PROFESSOR CHRYSTAL.

CHARLES TWEEDIE, M.A., B.Sc., *Lecturer.*

For Synopses of Lectures, see under Faculty of Arts.

II. NATURAL PHILOSOPHY.

PROFESSOR

For Synopsis of Lectures, see under Faculty of Arts.

III. CHEMISTRY.

PROFESSOR CRUM BROWN.

For Synopsis of Courses, see under Faculty of Medicine.

IV. DRAWING AND MENSURATION.

W. HUME KERR, M.A., B.Sc., *Lecturer.*

CLASS OF DRAWING (GEOMETRICAL, ENGINEERING, AND ARCHITECTURAL), AND OF MENSURATION.—Students may attend at any time between 10 A.M. and 2 P.M. each day.

All Students are recommended to take the Classes in Engineering and Drawing together.

The Class in Drawing may also be attended with advantage by those who propose subsequently to attend the Class in Engineering, as Students should be able to readily understand mechanical diagrams, and to apply the graphic methods of calculation frequently employed by Engineers. The Class will be found useful also to those who propose to become architects or surveyors.

A course of instruction has been specially arranged to meet the requirements for the Degree of B.Sc. in Public Health. [See under Public Health, p. 228].

#### SYNOPSIS.

##### *Ordinary Class.*

The work is arranged so as to form a Two Years' Course, and will consist of Lectures and Practical Instruction in Drawing. The Courses are described as "Junior" and "Senior"; and, though not imperative, it is desirable that they should be taken in their natural order.

*Junior Course* :—Plane Geometrical Drawing—Construction of Curves—Design of Toothed Wheels and Gearing—Graphic Calculation and Graphic Methods of determining Stress in Structures—*Loci* of Points in Link-work—Diagrams of Velocity, Acceleration, Work, and Energy. (Course for Session 1901-1902.)

*Senior Course* :—Solid Geometry—Interpenetration and Development of Surfaces and Solids—Isometric Projection—Perspective—Structural and Machine Drawing—Rough Sketching of Machines, &c., and the Preparation therefrom of Working Drawings—Design of Structures in Masonry, Timber, Steel, and Iron,—Roofs, Bridges, Skew Arches, &c.—General Machine Design.

#### V. ENGINEERING.

PROFESSOR BEARE.

##### *Winter Session.*

I. CLASS OF ENGINEERING.—The object of the Course is to

show the practical application of Science to some branches of Engineering. The Lectures, combined with Laboratory instruction, form a Two Years' Course.

The following subjects are dealt with in the Lectures : —

1. Applied Mechanics, including Hydraulics.
2. Strength and other Properties of Materials.
3. Theory of Mechanism.
4. Machine Design.
5. The Theory, Construction, and Design of various types of Heat Engines.
6. The Theory and Design of Water Wheels, Turbines, and Pumps.
7. Transmission of Power.
8. Iron and Steel Roofs and Bridges.
9. Earthworks and Masonry Structures.
10. Rivers, Canals, Harbours, and Breakwaters.
11. Water Works, Drainage, Sewerage and Sewage disposal.
12. Railways and Tramways.

In the Laboratory the work undertaken includes experimental investigations of the Strength and other Properties of the Materials commonly used by Engineers ; experiments on the Flow of Water over Notches, through Orifices, Pipes, &c.; experiments on Friction ; and experiments on the Steam Engine and Boiler.

Monthly Examinations are held during the Session ; and each week, unless there be an Examination, a Problem Paper is set to be worked at home. The questions proposed are such as are met with in the practice of Engineering ; and the answers, being returned to the Students annotated and corrected, form a body of Examples for subsequent reference.

There is also a Tutorial Class held weekly at which the questions set in the Problem Paper of the previous week are discussed and explained.

Engineering Works and Factories are, from time to time, visited by the Class, under the direction of the Professor.

The attention of Students proposing to follow the foregoing Course is specially directed to the following Class (II.), one attendance at which, though optional, is strongly recommended.

II. ADDITIONAL CLASS. — A short preliminary course in General Mechanics is given, *without additional fee*, for the benefit of those entering the Class of Systematic Engineering with an imperfect knowledge of Mechanical principles. This Class, taught by an Assistant, will meet five days a week for about a month, commencing on the same day as the General Science Classes open.

III. A COURSE OF INSTRUCTION IN SANITARY ENGINEERING AND BUILDING CONSTRUCTION, designed for Candidates for Degrees in Public Health, and consisting of about fifty Lectures. See under Public Health, p. 227.

IV. THE FULTON ENGINEERING LABORATORY.—Students here receive practical instruction in the processes employed by the Engineer in the experimental determination of the physical and economical constants of materials, machines, and prime movers, and in the practical application of electricity.

#### *Summer Session.*

V. ENGINEERING FIELD - WORK.—A course of Practical Instruction in Surveying, Levelling, Setting Out, and Calculation of Quantities, is given each Summer.

The Course consists of lectures, and of practical work, as undertaken in the field and in the office, and occupies the whole of each day for about three weeks. The hours of instruction thus correspond in number to an ordinary Course extending over a much longer period.

#### *Course of Study.*

The following Course is recommended for Students preparing for the Degree of B.Sc. in Engineering :—

1st Year, -- Mathematics [Intermediate Honours Class



(Winter), or Advanced Class (Summer)], Geometrical Drawing and Graphics, Chemistry (or Natural Philosophy).

*2nd Year.*—Engineering and Natural Philosophy (or Chemistry), Laboratory (Chemical or Physical), Engineering, Engineering and Mechanical Drawing.

*3rd Year.*—Natural Philosophy (Advanced Class), Engineering, Optional Course.

In some cases a modification of the above may be desirable.

The Engineering Field-Work Class may be taken in any of the Summer Sessions.

## VI. DYNAMICS.

C. G. KNOTT, D.Sc., *Lecturer.*

As a preparation for the Course described below, Students of Engineering are advised to take the Summer Half-Course on *Elementary Dynamics*, either before or after passing the First B.Sc. Examination in Natural Philosophy. For Synopsis, see Courses in Faculty of Arts.

The Advanced Science Course on Dynamics, of fifty Lectures, by the Lecturer on Applied Mathematics, is adapted for Engineering Students. In the treatment of the subject practical applications and, in particular, graphical methods of solution will receive attention; while the simpler processes only of the differential and integral calculus will be used. The Course will include the Kinematics, Kinetics, and Statics, of particles, rigid solids, flexible cords, and perfect fluids; and the more elementary parts of Strains and Elasticity.

*Books recommended.*—The simpler sections of Tait's *Dynamics*; Rankine's *Applied Mechanics*.

## VII. GEOLOGY AND MINERALOGY.

PROFESSOR JAMES GEIKIE.

For Synopsis of Lectures, see Summer Course under Pure Science.

## III.—PUBLIC HEALTH.

## I. LABORATORY WORK.

PROFESSOR HUNTER STEWART.

## (I.) PRELIMINARY WORK.

Exercises in weighing, each worker testing the accuracy of the graduation of his pipettes and burettes by weighing. Taking specific gravities of solids and liquids.

## (II.) CHEMICAL AND PHYSICAL WORK.

AIR.—Temperature, Maximum and Minimum Thermometers—Pressure—Reading of Barometer, and correction for Elevation and Temperature—Moisture—Dew Point by Daniell's Hygrometer and Wet and Dry Bulb Thermometers—Determination of Absolute and Relative Humidity—Quantitative Determination of Carbonic Acid and Ammonia.

SOIL.—Determination of Water Capacity—Porosity and Permeability of Sand and Loamy Soil—Determination of Ammonia and Organic Nitrogen in Soil, and of Carbonic Acid in Ground Air—Use of Earth Thermometers.

WATER.—Total Solid Residue and Quantitative Estimation of Lime, Magnesia, and Sulphuric Acid in a Water Residue—Chlorides—Hardness—Lead in Water (colorimetrically)—Organic Matter in terms of "Albuminoid Ammonia," Organic Carbon and Nitrogen, and as "Oxygen required"—Nitrates and Nitrites by conversion into Nitric Oxide and Measurement of the Gas—Nitrites by Gries' Method.

*Gases in Water.*—Determination of Total Volume of Gases and of the Nitrogen and Oxygen—Estimation of Oxygen by Manganous Chloride.

*Sewage.*—Composition of Sewage and of Effluents from Irrigation Works.

FOODS.—*Cereals, &c.*—Estimation of Albuminoids by Kjeldahl's Method, Fat by Extraction, Starch by conversion into Sugar.

*Sugar.*—(1) By Fehling's Solution volumetrically, and in

Terms of Weight of Copper Oxide reduced (2) by Polarimeter.

*Milk*.—Estimation of Albumen, Fat, Sugar, and Salts by Ritthausen's Method, and by Hoppe-Seyler's Method—Specific Gravity and Reaction of Milk.

*Butter and Butterine*.—Moisture—Salt—Casein—Determination of Nature of the Fat in terms of Volatile and Fixed Acids.

*Tea and Coffee*.—Moisture, Extract, Ash.

*Cocoa*.—Moisture, Fat, Ash.

*Wine, Beer, &c.*—Extract, Alcohol, Sugar, and Acidity.

*Lime Juice and Lime Juice Cordial*.—Extract, Ash, Sugar, Acidity.

DISINFECTANTS. — Estimation of available Chlorine in Bleaching Powder—Determination of Comparative Value of different Disinfectants by lethal action on Microbes.

VENTILATION.—Determination of the amount of Carbonic Acid and of moisture in the air of an occupied room. Each worker reports at least once on the state of the air of a room, ventilated by extraction, in terms of the amount of Carbonic Acid present, and also of the amount of air renewal, measured by the Anemometer.

The foregoing work is done by each worker, and in each subject his results must satisfy the teacher before he can leave it. During this part of the Course, Laboratory Lectures are given twice a week, when the rationale of the methods and the interpretation of the results are discussed.

### (III.) BACTERIOLOGICAL.

The subject of the Laboratory Lectures during this part of the Course consists of a consideration of:—

The Morphology and Classification of the Micro-organisms—Sterilization by Dry and Moist Heat—Disinfection—Methods of Cultivation—Methods of obtaining Pure Cultures in Solid and Liquid Media—Anærobic Micro-organisms, and the Methods for their Culture—Bacterial Products, Ptomaines and Antitoxins—Micro-organisms in

Water, Air, and Soil—Removal of Micro-organisms from Water (1) on the large scale by Sand Filtration—Construction and working of Filter Beds—Theory of Sand Filtration—(2) On the small scale by Pasteur-Chamberland, Berkefeld, and other Filters—Micro-organisms in Milk—Sterilization of Milk on small and large scale—Pasteurization of Milk.

Practical work by each worker—Sterilizing all glass apparatus, *e.g.* tubes, dishes, pipettes, &c.

Preparation in all stages of the following Culture Media—Nutrient Broth, Jelly, and Agar Agar, Blood Serum, Potato Gelatine, Worts Gelatine, Glycerine Agar, Potatoes in Roux's Tubes.

From a mixture of several Micro-organisms to get a pure Culture of *one*, by (1) method of dilution in liquid medium, and (2) by plate cultivation on a solid medium.

Cultivation, staining, and microscopical examination of :—

*Mould Fungi*.—Penicillium—Aspergillus—Mucor.

*Yeast Fungi*.—Yeast—Mycoderma Vini.

*Fission Fungi*.—The ordinary bacteria found in Air, Water, Soil, or Milk, *e.g.* Bacillus Subtilis, Mycoides, Megaterium, Proteus, Lactic Acid, Prodigiosus, Micrococcus Aurantiacus, Ureæ, &c.; and also the following pathogenic forms—Tubercle, Diphtheria, Anthrax, Typhoid, Tetanus, Cholera, Plague, Coli Communis, and Enteritidis.

Cultivation of Micro-organisms in Air by Petri's Method, in Soil (from borings at different depths), and in Water. Daily for a week each worker bacteriologically examines the Edinburgh Water Supply. The filter beds are visited, and samples of the water both before and after filtration are bacteriologically examined.

## II. PHYSICS.

PROFESSOR

CARGILL G. KNOTT, D.Sc., *Lecturer.*

For Synopses, see under Faculties of Arts and Medicine.

III. GEOLOGY.

PROFESSOR GEIKIE.

For Synopses of Courses, see under Pure Science.

IV. PUBLIC HEALTH AND SANITARY SCIENCE.

PROFESSOR HUNTER STEWART.

1. Sanitary Law, specially the Public Health Act (Scotland), 1897—The English Acts—Notification of Infectious Diseases—Housing of the Working Classes—Factories—Cowsheds and Dairies—and Nuisance removal Acts, &c., Bye-laws.

2. Vital Statistics—Census, how determined—Death Rates crude, corrected and standard—Birth and Marriage Rates—Life Tables—Zymotic Death Rate—Age Rate, Case Mortality—Variations in Case Incidence and Case Mortality—Value of Vital Statistics in Public Health Work—Mortality as affected by Occupation—Sickness Rates, &c.

3. *Epidemiology*—Medicine in relation to Public Health—Immunity—Prophylaxis—Vaccination—Geographical distribution and etiology of the infectious diseases—Diseases of Animals communicable to man—Food Poisoning, Botulismus—Climates as determined by prevalent winds, temperature, moisture, altitude, and soil—Tropical, Temperate, and Arctic Climates.

4. Practical Sanitation—Water Supplies—Infectious Diseases Hospitals—Disinfection of clothing, dwellings, and discharges from sick—Slaughter-houses—Meat inspection—Ventilation—Sewage disposal—Hygiene of Schools—Disposal of the dead.

V. SANITARY ENGINEERING, BUILDING CONSTRUCTION, ETC.

PROFESSOR BEARE.

- (1) Site, environment, and construction of Dwellings.
- (2) Water supply and distribution.
- (3) Collection, treatment and disposal of Sewage and other Refuse.
- (4) Air Supply, Ventilation and Warming.



(5) General design, with structural and mechanical details, of Sanitary Works, Municipal and Domestic, Hospitals.

(6) Nature, strength, and fitness of structural materials employed in Sanitary Works.

#### VI. INSTRUCTION IN MENSURATION AND DRAWING.

W. HUME KERR, M.A., B.Sc., *Lecturer.*

The Course will include the following subjects:—Scales, their Construction and Uses—Estimation of Areas and Volumes—Elements of Plane and Solid Geometry, and their application to the making of Structural Drawings from Models and Figured Sketches—The use of the Slide Rule and other Calculating instruments—Plotting of Land Surveys and Sections.

VII. CLINICAL INSTRUCTION regarding Fevers and Infectious Diseases during three months in a recognised Hospital.

### IV.—AGRICULTURE.

#### I *a.* MATHEMATICS.

PROFESSOR CHRYSTAL.

CHARLES TWEEDIE, M.A., B.Sc., *Lecturer.*

Senior Classes, as for M.A. Synopses, see Faculty of Arts.

#### I *b.* ZOOLOGY.

PROFESSOR EWART.

For Synopsis of Lectures, see under Faculty of Medicine.

#### I *c.* BOTANY.

PROFESSOR BALFOUR.

For Synopsis of Lectures, see under Faculty of Medicine.

#### II. NATURAL PHILOSOPHY.

PROFESSOR

For Synopsis of Lectures, see under Faculty of Arts.

#### III. CHEMISTRY.

PROFESSOR CRUM BROWN.

For Synopsis of Lectures, see under Faculty of Medicine.

IV. AGRICULTURE AND RURAL ECONOMY.

PROFESSOR WALLACE.

1. *Definition of Agriculture.*—Aid given by the Allied Sciences.
2. *Surface Geology.*—Formation and Classification of Soils—their Physical and Chemical Properties. Importance of Organic Nitrogen. Fixation of free Nitrogen. Indications of good or bad Soils—Methods of Management and Improvement.
3. *Drainage and Cultivation.*—Practice—Advantages of Drainage—Irrigation—Wet-Warping—Mixing or Top-Dressing—Claying—Marling—Chalking—Liming—Paring and Burning—Clay-Burning. The Effect on Soils of Cultivation and the Growth of Plants.
4. *Implements and Machines of the Farm.*—Importance of their proper Construction and careful Management.
5. *Steam Cultivation.*—Advantages and Disadvantages—Development of the “Darby” Land Digger.
6. *Motive Powers Employed on the Farm.*—1st, Man; 2nd, Horse; 3rd, Mechanical Powers (Water, Wind, Steam)—their Values and Advantages.
7. *Farm Servants.*—Labour and Wages—Day-work and Piece-work. Detailed and total costs of Horse and Hand Labour.
8. *Importance of Rotations.*—Different Rotations and reasons why they are adopted—Systems of Farming.
9. *Our Farm Crops* (including Grain, Root, Forage, and Hay Crops).—Selection and Cultivation. Prevention of Diseases.
10. *Identification of Grasses and Valuable Pasture Plants.*—Their Characteristics and Habits—Detection of Adulterations of Seeds—Regulations to protect Farmers in buying Seeds.
11. *The Management of Permanent Pasture.*—Proper Methods of making new Pasture—its After-treatment.
12. *Weeds in Pastures* and Means of Destroying them.
13. *Silage and the System of Ensilage.*—Its Advantages, &c.—Its Suitability and Unsuitability according to Locality.
14. *Manures.*—Farm-yard Manure—Mixing, Storing, and Application—great advantage as a General Manure. Special Manures and so-called Artificials—Times and Methods of their Application. Utilization of Liquid Manure and Town Sewage.

15. *Buildings and Fences.*—Construction of Fences—General Arrangement of Farm-Buildings—best Flooring and Inside Plans and Dimensions of Byres, Cattle-Sheds, Stables, &c.—Covered Yards—Ventilation—Drainage.

16. *Live-Stock.*—Cattle, Pigs, Horses, Sheep, Poultry—Breeds of each, and suitability to Local Conditions—"Principles of Breeding." Feeding and Management—Mixtures of Food. Cost of Producing a Stone of Beef, Mutton, and Pork, showing Profit.

17. *Dairying in all its Branches*, including the suitability of surrounding Conditions—Classes of Dairy Stock, and their Management—Treatment of Milk, its Sale, its Manufacture into Cheese, Butter, &c.

18. *Feeding Stuffs.*—Suitability of Common Food Substances to different Classes of Farm Stock—Purchase and disposal of the same—their Manurial Residues.

*Text-Books.*—Wallace's "Farm Live Stock of Great Britain," M'Connell's "Note-Book of Agricultural Facts and Figures," Fream's "Elements of Agriculture," "Rothamsted Experiments," and "Soils and their Properties."

Students are invited to consult the Professor at the beginning of the Session as to their plan of work.

Periodical visits will be made to suitable Farms. A Medal may be given for the best report on these excursions.

## THE GARTON LECTURES ON COLONIAL AND INDIAN AGRICULTURE.

PROFESSOR WALLACE.

*Session 1901-2, 20 Lectures.*

*Introduction.*—General view of the Agriculture of Canada, Australasia, Egypt and South Africa.

### THE DOMINION OF CANADA.

*Eastern Provinces.*—Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island (the garden of Canada)—the leading features of the country—the Agricultural practices of

these older settled areas—The Dairy Industry—Exports of Cheese and Butter.

*Manitoba and the North-West Territories.* — System of Government Survey into Townships of six miles square—Wheat-growing on the Prairies—Elevator system of handling grain—Cattle Ranching—Sheep Breeding and Feeding—The advantages of Mixed Farming—The Scotch Crofter Settlements.

*British Columbia.*—Its Grazing Capabilities—Its Agricultural Resources, with special reference to the Peace River District.

*Government Aid to Agriculture.* — The Experimental and Demonstration Farms—Agricultural Education with special reference to the Guelph Agricultural College, Ontario.

#### AUSTRALASIA.

*The Distinctive Features* (Orographical, Geological, etc.) of the various Colonies — New South Wales, Victoria, South Australia, Queensland, Western Australia, New Zealand and Tasmania.

*Crop Cultivation.* — Rotations—Cereals—Forage—Potatoes—Diseases, Fungoid and Insect Attacks, and the Injurious Influences of Climate—Grape Growing—The Wine Industry—Trade with Europe.

*Pasture.*—Good Native Grasses—Salt Bushes—Injury to Sheep and Wool from Spear Grass and Bur Clover (*Medicago denticulata*).

*Water Supply.*—Irrigation (especially in Victoria)—Artesian Wells (chiefly in Queensland)—Rainfall—Periodic Droughts—Desert Country.

*Reclamation of Land.*—“Ring-barking” forest areas—“Bush-falling”—“Fern-crushing”—Drainage of Swamps—Burning off withered growths and the sowing of grass and other pasture seeds—Thistles on newly cleared land—Fencing.

*Live Stock Industry.*—Sheep—The Merino, Longwools (Lincoln, English- and Border-Leicesters, Romney or Kent Sheep)—Crosses as frozen meat producers—The Wool Trade.

*Horses.*—Breeding and management—Their value as Army Remounts in India and South Africa.

*Cattle.*—British breeds imported into the Colonies—Short-horn, Polled Angus, Hereford, Devon, Kerry, and Ayrshire, etc.—Kiama Milking Breed.

*Dairying.*—Rapid development in the Colonies—Export of Butter and Cheese—Encouragement given and control exercised by Government over exports—Cold Storage.

*Agricultural Colleges.*—At Christchurch, Roseworthy, Dookie, Longernong, and Hawkesbury—Systems of Management—Successful Results.

#### THE SMALLER CROWN COLONIES.

*Main Points of Interest in*—West India Islands, British Guiana, the Straits Settlements, Uganda and other African Continental Possessions and Islands—Islands in the South Atlantic and Pacific Ocean.

*Miscellaneous.*—Relations of the Agriculture of the Colonies and India to that of the Mother Country—Exports of Agricultural Produce, &c., from the Colonies and India, with special reference to Earth Phosphates, Bones, and other manures, Frozen Meat, Cotton, Grain (including Wheat), Tea and Coffee, Sugar, Fresh Fruits, Spices, &c.

[*The Garton Lectures on Agriculture in 1902-1903 will be devoted to India, Ceylon, Egypt, and South Africa.*]

*Session 1902-3, 20 Lectures.*

#### INDIA AND CEYLON.

*Introduction.*—General view of Agriculture of India, including the main features of the Presidencies and other great political divisions—Bombay, Madras, Central and North-West Provinces, Punjab, Bengal, Assam, Burmah, and Ceylon—with special reference to Geology, Soil, Irrigation, Climate, Peoples, Famines, and Chief Products.

*Tillage Implements.*—Indian Ploughs, Native Harrows, Hoes, Seed-drills, and Hand Implements. European Implements and their suitability or unsuitability to Indian conditions.

*Cultivation and Crops.*—Rotations and Mixtures. Tillage before



and after sowing. Seed and sowing. Harvesting and preparation for market. Commercial uses. Diseases and Injuries. Classification of Crops into Cereals, Pulses, Oil Seeds, Fibre, Fodder and Miscellaneous Crops, with special reference to the production of Wheat, Barley, Rice (Paddy), Maize, Millets (*Juar*, *Bajra*, and *Ragi*), and Sorghum—Gram and Horse-Gram, Lentil, Pea, Ground Nut, Rape, Linseed, Castor oil Plant, Sesamum—Cotton, Jute, Ramie, and Hemp—Lucerne and Guinea Grass, Sugar-cane, Tobacco, Cinchona, Tea, Coffee, Indigo, Poppy—the commoner valuable Grasses of India, and their cultivation as practised at the Allahabad Grass Farm and other military stations in Northern India—Grass Cutting—Haymaking—Silage.

*Irrigation.*—Land and other conditions suitable and unsuitable for Irrigation. Location and relative advantages of Canal, Well, and Tank (Lake, &c.) Irrigation. Quantity of Water necessary for various crops and time of application. Water lifting appliances—The common leather bucket, the Persian Wheel, the Picotta (lever lift), and the hand scoop lift.

*Manures.*—Village refuse, Nightsoil, Cattle Manure, Ashes, Bones, Fish Manures, Saltpetre, Green Manure, Castor seed refuse.

*Live Stock.*—Characteristics of Indian Cattle—Mysore, Kistna River, Gujarat, Kankreji, Nagar, Sind, Hurrianah, Malwi, Deccan, Southern Maratha, Konkan, Kanevarya, Goranea, Bagondha, Madras Red, Trichinopoli, Gir, Nellore, Kanganam, and Cinhalese—value as working and milch cattle. Buffaloes—Jaffrabad, Gujarat, Nagpur, and common breeds—their general characteristics and special milking qualities. Horses and Mules. Goats and Sheep. Common Diseases of the Domesticated Animals.

#### EGYPT.

*Introduction.*—Physical features—Soil, Climate, Population. The Fellahin or cultivating class.

*Irrigation.*—The Rise and Overflow of the Nile—The Ancient asin system of Upper Egypt—The Indian Canal System

introduced into Lower Egypt—Drainage—The system of washing Salt Land.

*Manure.* Pigeons' Dung — Ashes — Sabakh (Crude Saltpetre).

*The Chief Crops.*—Divided into Winter, Summer, and Autumn Crops, with special reference to Cotton, Sugar-cane, Barsim (Clover), Wheat and Barley, Maize—Rotations and Methods of Cultivation.

#### SOUTH AFRICA.

*Political Divisions.*—Cape Colony, Natal, The Transvaal, Orange River Colony, Rhodesia ; their Geological, Orographical and Land Surface Features.

*Population.*—British, Dutch, other White Nationalities, Black races, Labour and Wages.

*Cultivation.*—Rotations—Manures—Field Crops, with special reference to Wheat, Barley, Oats, Mealies (Maize), Millet, Lucerne, Sugar-cane, Potatoes and Root Crops — Possible development by means of Irrigation—Good and bad methods of Irrigation.

*Viticulture and Fruit-growing.*—Production and Exportation of Grapes, Oranges, and various tropical and semi-tropical fruits—The Wine Industry.

*Live Stock.*—The Wild Game—Cattle—Horses and Mules—Sheep and Goats—Ostriches, Breeding and Management—Dairying — Diseases, including Horse-sickness, Anthrax, Rinderpest, Redwater (Texas Fever), Scab in Sheep and Goats —Internal Parasites.

*General prospects* of South Africa as a country for immediate agricultural settlement.

#### V. AGRICULTURAL CHEMISTRY.

A. PEEBLES AITKEN, D.Sc., *Lecturer.*

The Course comprises Lectures, Demonstrations, and Laboratory work :—

1. *The Atmosphere.*—The relation of its constituents to plant life—rain, dew, fog, and hoar frost, their causes and effects.

2. *Soils*.—Origin and formation—physical and chemical processes included in the term “weathering”—inorganic and organic constituents of soils—essential elements of fertility—work of living organisms in the soil—decay and putrefaction of vegetable matter—formation of humus—nitrification—relation of soils to air and moisture—capillarity—absorption of salts by soils—lysimetry—circumstances affecting the composition of drainage water—amelioration of soils by physical and chemical means—classification, investigation, and analysis of soils.

3. *Plants*.—Mineral and organic constituents of plants—their transformations and translocations during the life of plants from germination to maturity—respiration, transpiration, and assimilation—plant nutrition, and the specific effects of nutritive substances upon the growth and development of plants—water culture and other methods of investigating plant nutrition—meteorological conditions affecting the health and vigour of plants—sources whence plants derive their nitrogenous constituents—symbiosis—analysis of vegetable substances.

4. *Manures*.—Their classification, composition, and characteristics—specific action and suitability for different soils, climates, and crops—economic use, and the principles regulating their application—methods of conducting manurial experiments—analysis and investigation of manures—valuation of manures, and of unexhausted fertility.

5. *Crops*.—Their composition and classification—fodder crops, their relative value as food—external conditions affecting their nutritive value, preservation, and digestibility—theory of rotations—crop residues and their relation to the fertility of the soil.

6. *Animal Nutrition*.—Chief constituents of the animal body—respiration—digestion—influence of diet on the growth and health of animals—laws of flesh and fat production, and relation of food to work—nutrient ratio as a guide to feeding—animal waste—relation of food to manure—external conditions affecting the health and growth of animals—preparation of fodder—analysis and investigation of feeding stuffs.

7. *Dairy Produce*.—Composition of milk—its physical characters—diseases and sophistications to which it is liable—char-

acteristics of its ingredients—its analysis—butter and cheese—their composition, sophistication, and analysis—scientific aspects of dairy management.

## VI. GEOLOGY.

PROFESSOR GEIKIE.

For Summer and Winter Courses, see under Pure Science.

## VII. VETERINARY HYGIENE.

Lectures of recognised teachers of the subject.

## VIII. AGRICULTURAL ENTOMOLOGY.

*Course of twenty Lectures and Laboratory Demonstrations.*

W. FREAM, LL.D., B.Sc., *Steven Lecturer.*

*(Free to Present and Past Students of the Agriculture Class.)*

Position of Insects in the Animal Kingdom.

Morphology and physiology of Insects, particularly in so far as such knowledge is useful in baffling attacks of insect pests. Structural modifications of the mouth, legs, and wings.

Life-history of Insects.

General principle that where the life history involves a series or cycle of changes, the measures of suppression should be directed against the weakest link in the chain. Illustrations.

Methods of insect attack, and enormous losses consequent thereon. Incidentally:—(a) Stage in the life-history of the insect at which it becomes actively injurious. (b) Period in the growth of the crop when insect injury begins. (c) Organs of the plant which are attacked.

Methods of *prevention*, as distinguished from *remedy*.

*General* methods of prevention or remedy, as distinguished from *special*. The former are, in the main, agricultural. The latter usually involve the application of specific insecticides, or the subjection of the crop to treatment distinct from ordinary agricultural operations.

Insecticides : composition and properties of the more important. Methods of application. Fumigation.

Mechanical appliances for the distribution of insecticides.

Inter-relationship of economic entomology and systematic botany.

Natural enemies of insects ; particularly (*a*) insectivorous mammals and birds, (*b*) other insects, (*c*) parasites.

Classification of insects, directed especially to the means of identifying injurious insects in their several stages.

Characters of the natural orders of insects illustrated by genera which furnish destructive species.

Special discussion of the natural orders Coleoptera, Hymenoptera, Lepidoptera, Hemiptera, and Diptera.

Convenient groupings of insects—(*a*) According to crop attacked ; (*b*) According to mode of attack.

Detailed discussion of insects injurious to crops, to forest and fruit trees, and to live stock in Britain, with methods of prevention and remedy :—*inter alia*—Wireworms, weevils, turnip-flies, bark beetles, thrips, saw-flies, sirices, surface-caterpillars, winter moths, codlin-moths, goat-moths, leopard-moths, magpie-moths, cabbage butterflies, aphides, scale-insects, mangel-flies, cabbage-flies, onion-flies, Hessian flies, wheat-midges, gout-flies, frit-flies, celery-flies, leather-jackets, ox-warble-flies, sheep's-nostril flies, gad-flies, forest-flies, sheep-louse flies, &c. Other pests, outside the class Insecta :—as millepedes, arachnids, eel-worms.

Present position of Agricultural Entomology in Britain, &c., and remarkable advances made during recent years. The course is profusely illustrated by carefully prepared natural specimens, the characters of which are demonstrated by the lecturer. The instruction is further facilitated by a unique set of special coloured diagrams, from the pencil of Miss Ormerod.

## IX. ECONOMIC SCIENCE AS APPLIED TO AGRICULTURE.

PROFESSOR NICHOLSON.

Lectures up to Christmas, see under Faculty of Arts.



## X. (a) FORESTRY.

COLONEL BAILEY, *Lecturer.*

Five days a week, at 10 A.M., during Winter.

1. *Principles of Sylviculture.*—On the general lines of Dr Schlich's "Manual of Forestry," vol. i.

2. *Formation and Tending of Woods.*—On the general lines of Dr Schlich's "Manual of Forestry," vol. ii.

3. *Protection of Standing Woods.*—Draining; fencing; cold winds and storms; fires; mammals and birds; insects; diseases; weeds; frost and drought; rain, hail, snow and rime; wounds.

4. *Timber.*—Its structure, characteristics, and identification; relative form and size of stem, branches and roots; physical properties; seasoning; defects and unsoundness; durability.

5. *Utilisation of Produce.*—Uses of wood; felling; conversion; measurement and sale; transport; harvesting of bark; fodder, fruits, and litter; impregnation; charcoal.

6. *Working Plans.*—General principles.

7. *Uses and Effects of Forests.*—Direct uses; indirect effects—effects on temperature and moisture, mechanical effects.

8. *Forestry in Scotland.*—General considerations; the financial question.

## X. (b) EXPERIMENTAL PHYSICS.

PROFESSOR

Full Laboratory Course, see under Faculty of Arts.

## X. (c) ENGINEERING.

PROFESSOR BEARE.

See Winter Course, under Graduation in Engineering.

## XI. ENGINEERING FIELD WORK.

PROFESSOR BEARE.

See Summer Course, under Graduation in Engineering.

## Graduation in Science.

### I.—PURE SCIENCE.

#### REGULATIONS AND CURRICULA FOR DEGREES IN PURE SCIENCE.

*Candidates who began attendance on qualifying Science Classes before 1st October 1892, are referred to the CALENDAR for 1895-96 or previous Calendars.*

*N.B.—Figures within brackets refer to the Sections of Ordinance No. 12.*

[1.] Two Degrees in Science are conferred by the University of Edinburgh, viz.:—Bachelor of Science (B.Sc.) and Doctor of Science (D.Sc.). These degrees are given in Pure Science and in Applied Science.

#### I.—PRELIMINARY EXAMINATION.

The Preliminary Examinations in General Education are held in the Examination Hall in the University, in autumn and spring. (Time-Table, pages 275, 276.)

Candidates may obtain Schedules at the Matriculation Office on and after 9th September 1901 and on and after 15th February 1902. The Schedules must be completed and lodged along with the Fees not later than 18th September 1901 and 1st March 1902 for the Autumn and Spring Examinations respectively.

Fee, 10s. 6d. for each appearance.

Candidates may pay the Fees personally, or transmit them to T. GILBERT, University, Edinburgh, by *Post Office* or *Postal Orders* or by *Bank Drafts* crossed Union Bank of Scotland (High Street Branch), Edinburgh, but not by cheques on private accounts. When names are not entered and Fees paid, or a Pass to the Examination obtained where the fee has been previously paid, on or before the stated dates, an additional or late entry fee of 10s. must be paid before the Candidate can be admitted to Examination. This fee will not be received after twelve o'clock of the last day but one preceding the Examination for which the Candidate desires to appear, without the express permission of the Dean of his Faculty and the subsequent sanction of the Senatus. Candidate must enter his Name and pay the Fee, or, when the Fee has been previously paid, obtain a Pass, for each periodical Examination at which he desires to appear.

[II.] 1. Candidates before entering on the Curriculum must, unless exempted, pass a Preliminary Examination in the following subjects:<sup>1</sup>—

(1) English.

(2) One of the following:—Latin, Greek, French, or German.

<sup>1</sup> See section 5, and also additional Regulations of Joint Board of Examiners, p. 448.

- (3) Mathematics.
- (4) One of the following :—Latin, Greek, French, or German (if not already taken), Italian, or such other language as the Senatus may approve,<sup>1</sup> Dynamics.
2. *English* includes Grammar and Composition, and the Outlines of Geography and British History, the standard being that presently adopted for the Higher Grade Leaving Certificate of the Scottish Education Department.
3. *Latin* and *Greek* comprise grammatical questions, translations into English from Latin or Greek authors, not previously prescribed, and translations of plain passages or easy sentences from English into Latin or Greek. The standard is that presently adopted for the Lower Grade Leaving Certificate.
4. *French*, *German*, and *Italian* comprise grammatical, literary, and easy philological questions, translation into English from French, German, or Italian authors, not previously prescribed, and translations from English into French, German, or Italian. The standard is that presently adopted for the Higher Grade Leaving Certificate of the Scottish Education Department.
5. *Mathematics*—A student, who, having passed the Arts Preliminary Examination, has thereafter obtained a certificate of attendance on a qualifying class of Mathematics, will not be required to pass any further examination in Mathematics as a condition of entering on the course of study for graduation in Science.
6. Candidates may take Mathematics on the intermediate standard instead of on the higher standard,<sup>2</sup> provided they also take an additional modern language on the standard of the Preliminary Examination for Degrees in Medicine, as a fifth subject.

*Mathematics on the intermediate standard* comprises Mathematics on the lower standard—viz., (1) Arithmetic, including Vulgar and Decimal Fractions, Proportion, Percentage, Square Root, Simple Interest; (2) Algebra, including Fractions, Factors, Square Root, Equations of the First Degree, Simultaneous Equations of the First Degree, Easy Quadratic Equations, Problems leading to the above Equations; (3) Geometry—Euclid, Books I., II., and III. (or their equivalents), with easy deductions; and also (a) Euclid; Book VI., Propositions 1-19, or Geometry equivalent thereto. (b) Algebra; Quadratic Equations, Ratio and Proportion. (c) The Trigonometry of Right-angled Triangles.

No Candidate will be entitled to profess Mathematics, Natural Philosophy, or Astronomy at the Final Science Examination, unless he has passed the Preliminary Examination in Mathematics on the higher standard.

<sup>1</sup> Any Candidate who proposes to be examined in a language other than those above named, is required to apply to the Senatus for approval before 1st February or 1st July for the Spring and Autumn Examinations respectively.

<sup>2</sup> This does not apply to graduation in Engineering.

*Mathematics on the higher standard* comprises Mathematics on the lower standard as above, and Books IV., VI., and the first twenty-one propositions of Book XI. (or their equivalents), with deductions, Quadratic Equations, Trigonometry to the solution of Triangles inclusive, and the use of Logarithmic Tables.

7. *Dynamics* includes Elementary Statics and Kinetics of Solids, Liquids, and Gases.
8. A Candidate must pass in all the required subjects at one or not more than two Examinations, provided that he may offer himself for re-examination, as often as may be necessary, to satisfy this condition.
9. Attendance on any Science Class will not qualify for Graduation in Pure Science unless the whole Preliminary Examination has been previously passed.

#### BOARDS OF STUDIES.

(*Ordinance No. 12.*)

VI. (1) It shall be the duty of the Senatus to determine from time to time the number of meetings of which a full course in any subject shall consist, and to report its determination to the University Court for its approval.

(2) The Senatus, with the approval of the University Court, may sanction half courses of not less than half the number of meetings which constitute a full course in the subject ; but two half courses shall be held to be equivalent to a full course in such cases as the Senatus, with the approval of the University Court, may determine, and under such regulations as may from time to time be made for that purpose.

(3) It shall be the duty of the Professor and Lecturer<sup>1</sup> annually at the end of each winter session to submit to the Senatus a scheme specifying what proportion of the courses shall be devoted to lectures, practical demonstrations, examinations, and tutorial work respectively. The Senatus shall transmit such scheme, with such observations as it may think fit to make thereon, to the University Court for its approval.

(4) It shall be the duty of the Professors and Lecturers annually at the end of each winter session to submit to the Faculty of Science to be hereafter constituted in each University, for its consideration, a syllabus of the subjects and books proposed for the work of their classes during the next Academical Year. The Faculty of Science shall transmit such syllabus, with such observations as it may think fit to make hereon, to the Senatus for its approval.

VII. The provisions of the preceding section shall not apply to approved Institutions or recognised teachers outside the Town in which the University is situated ; but the University Court shall not grant or continue recognition to any Institutions or teachers unless they shall be

<sup>1</sup> This applies to all Extra-mural Teachers in Edinburgh whose Courses have been recognised.

satisfied that their courses of instruction are equivalent to the courses sanctioned in the Universities of Scotland.

(*Ordinance No. 42.*)

II. The Commissioners statute and ordain as follows:—

(1) For the better carrying out of the purposes of Section VI., Sub-sections 1, 2, and 3, of Ordinance No. 12 [General No. 7—Regulations for Degrees in Science], the Senatus Academicus shall institute a Board or Boards of Studies consisting of Professors in the Faculty of Science, together with such Professors in other Faculties whose subjects qualify for graduation in Science, and such of the Lecturers in the University appointed under the provisions of Ordinance No. 17 [General No. 10—Regulations as to Assistants and Lecturers] as the Senatus may from time to time select.

(2) The Senatus shall appoint one of the members of such Board or Boards to be Convener thereof.

(3) It shall be the duty of such Board or Boards of Studies to consider the matters specified in the said Section VI., Sub-sections 1 and 2, of the said Ordinance, and to report their opinion on the same to the Faculty of Science for consideration before transmission by the Faculty to the Senatus.

(4) In carrying out the duty imposed upon them by the said Section<sup>1</sup> VI., Sub-section 3, of the said Ordinance, the Professors and Lecturers shall submit the schemes therein mentioned to the Board or Boards of Studies, by whom the same shall be transmitted to the Faculty of Science, who shall submit them to the Senatus Academicus, with such observations as they may think fit to make thereon.

## II.—DEGREE OF B.SC. IN PURE SCIENCE.

[III.]<sup>2</sup> 1. Candidates for the Degree of B.Sc. must, in the course of not less than three Academical years (*i.e.* three Winter Sessions, or two Winter Sessions, and three Summer Sessions), attend at least seven courses of instruction in the subjects included in the Science Examination which they purpose to undergo.

2. Three of these Courses must be in subjects prescribed for the First Science Examination, and four must be in subjects prescribed for the Final Science Examination.

[IV.] 3. Four of the seven Courses must be taken in the University of Edinburgh. The remaining three Courses may be taken at this University or at other Universities or Institutions approved by the University Court, or under teachers recognised by the University Court for purposes of Graduation in Science, provided that the fees for attendance at an approved Institution or under a recognised teacher in Edinburgh, shall in all cases not be

<sup>1</sup> See footnote, page 241.

<sup>2</sup> Figures within brackets refer to the Sections of Ordinance No. 12.



less than the fees exigible for the corresponding Courses in the University of Edinburgh.<sup>1</sup>

- [v.] 4. Every Candidate for a Degree in Science must produce his Matriculation Ticket for the year in which he appears for Examination or Graduation.
5. All Candidates, not Matriculated Students of this University, availing themselves of the permission to attend Lectures at approved Institutions or by recognised teachers in Edinburgh, must, at the commencement of each year of such attendance, enrol their names at the Matriculation Office, paying a fee of the same amount as the Matriculation Fee, and having, in respect of such payment, a right to the use of the University Library.
- [xvii.] 6. A Student who before October 1892 has completed a part of his course of study with a view to Graduation in Science under regulations in force at the time in this University, and shall thereafter complete his course of study and pass the necessary Examinations in conformity with such regulations, or with those now in force, may become a Candidate for the Degree of B.Sc.
7. Candidates for Graduation who have previously passed the Examinations are required to intimate to the Clerk to the Senatus their intention to graduate, and pay the Registration fee at least ten days before the date of Graduation. Those whose Examinations are not then completed are required to give such intimation at the earliest possible date, and at latest one clear day before the day of Graduation.

#### UNIVERSITIES AND INSTITUTIONS AT PRESENT RECOGNISED IN TERMS OF REGULATION II. 3.

The Universities of St Andrews, Glasgow, Aberdeen, Oxford, Cambridge, Dublin, and Victoria University, Manchester. Heriot-Watt College:—Mechanics and Physics, as equivalent to one course in Natural Philosophy, qualifying for the first B.Sc. examination in Pure Science, Engineering, and Agriculture; Advanced Chemistry and Chemical Laboratory, as qualifying for the final B.Sc. examination; Electricity (Pure and Applied), Engineering-Laboratory Practice (Mechanical or Electrical), as qualifying for the degree of B.Sc. in Engineering. The Glasgow and West of Scotland Technical College; University College, Dundee; University College, London; King's College, London; The Royal Colleges of Science, South Kensington; The Owens College, Manchester; The Mason College, Birmingham; The College of Science, Newcastle-on-Tyne; The Yorkshire College of Science, Leeds; University College, Bristol; University College, Liverpool; The Firth College, Sheffield;

<sup>1</sup> Only Institutions and Teachers with the necessary staff and appliances for theoretical and Practical Instruction in Science will be recognised by the University. A List of Universities and Institutions at present recognised in terms of this regulation is given on this and the following page.

University College, Nottingham; The University College of North Wales, Bangor; University College of Wales, Aberystwyth; The University College of South Wales and Monmouthshire; The Engineering College, Cooper's Hill. The Queen's College, Belfast; The Queen's College, Cork; The Queen's College, Galway; The College of Science, Stephen's Green, Dublin; The School of Mines, Dublin; The Royal Agricultural College, Cirencester; The College of Agriculture, Downton; and the Veterinary Colleges of the United Kingdom; The Presidency Colleges in Calcutta, Madras, and Bombay; The Thomasson Engineering College, and the Engineering College, Poona; M'Gill University, Montreal; The University College of Toronto; Queen's University, Kingston, Ontario; The University of Sydney; The University of Melbourne; The University of Adelaide; Wellington College; The University of New Zealand; The University of Otago; Dalhousie College, Halifax, Nova Scotia; Stellenbosch College, South Africa; The University of Harvard; The University of Yale; The Johns Hopkins University; The Universities, and Polytechnic Schools supported and regulated or recognised by the governments of the respective Countries of Europe.

### 3. TEACHERS RECOGNISED UNDER REGULATION II. 3.

A. P. Aitken, D.Sc. (Chemistry), 19th June 1899; R. Turnbull, D.Sc. (Botany), 19th June 1899.

## EXAMINATIONS.

### DEGREE OF BACHELOR OF SCIENCE.

For the Degree of B.Sc. there are two Examinations, conducted by written questions, as well as orally and practically.

#### (a) *First Science Examination.*

[VIII.] 1. The First Examination for the Degree of B.Sc. is as to the general knowledge of the Candidate on the following subjects:—

- (i.) Mathematics, or Biology (*i.e.* Zoology and Botany).
- (ii.) Natural Philosophy.
- (iii.) Chemistry.

2. The Examination in these subjects is the same as for the ordinary degree of Master of Arts. [The First Professional Examination (Medicine) in Zoology and Botany is not accepted as equivalent.]

3. Candidates may present themselves in any one or more of these subjects at any Examination held after they have attended a full course in the subject or subjects professed.

#### (b) *Second Science Examination.*

[IX.] 1. The Second B.Sc. Examination is on a higher standard in any three or more of the following subjects:—

- (1) Mathematics.
- (2) Natural Philosophy.
- (3) Astronomy.
- (4) Chemistry.
- (5) Human Anatomy, including Anthropology.
- (6) Physiology, including Histology and Physiological Chemistry.
- (7) Geology, including Mineralogy.
- (8) Zoology, including Comparative Anatomy.
- (9) Botany, including Vegetable Physiology.

2. The standard of this Examination is as nearly as possible equivalent to that of the Examination for the Degree of M.A. with Honours, where the subjects are different : and where the subjects are the same the examination is identical.

3. A subject already taken for the First Examination may be taken also for the Second Examination.

4. Candidates presenting themselves for the Second Examination must have attended four full courses of higher instruction, including practical or laboratory work, in the Subjects professed. [See below.]

5. The Second Science Examination cannot be taken sooner than one year after the Candidate has passed the First Science Examination.

[X.] 6. If a student, before passing the Preliminary Examination has attended a class qualifying for graduation, the Senatus may, on special cause shown, permit him to count such class for examination, on condition of his passing the full Preliminary Examination within such time as the Senatus may appoint.

[XI.] 7. A Candidate for the degree of B.Sc. is not deemed to have attended a class as part of the curriculum for that degree unless he presents a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

[XII.] 8. The Examiners for the degree of B.Sc. have power to report that a Candidate has passed with special distinction in one or more of the subjects professed by him : and in such case a Diploma is given setting forth the subjects in respect of which the degree has been granted, and the subject or subjects in which special distinction has been obtained.

9. A Candidate who has passed the First and Second Science Examinations, and otherwise complied with the regulations for Graduation, will be recommended to the Senatus for the Degree of B.Sc.

#### COURSES FOR FINAL EXAMINATION IN PURE SCIENCE.<sup>1</sup>

In Mathematics and Natural Philosophy the Examination is the same as for Honours in Arts. In each of the other subjects professed, two written papers are set, namely, a *first* and a *second* paper ; and the practical and Oral Examinations also consist of *first* and *second* parts. The second part of the Examination is of a higher standard than the first. Candidates must pass the first section of the Examination (as well written as practical and oral) in all the subjects professed. They

<sup>1</sup> See footnote, page 243

must also pass the second section in at least one of their subjects. The following Courses of Higher Instruction in this University, (1) *Intermediate* and (2) *Advanced*, qualify for the first and second stages of the Final Examination in Pure Science:—

1. Mathematics: (1) *Intermediate Course*, as for Honours in Arts. (2) *Advanced Course*, as for Honours in Arts.

2. Natural Philosophy: (1) *Intermediate Mathematical*, (2) *Advanced Mathematical*, *Advanced Experimental*, or *Special Laboratory Course*.

3. Astronomy: (1) *Intermediate Course*: Winter Lecture Course, including Practical work, (2) *Advanced Course* of Practical Instruction at the Observatory.

4. Chemistry: (1) *Intermediate Course*: One Winter Course, or two Summer Courses in the Laboratory, and a Lecture Course on Organic Chemistry. (2) *Advanced Course*: Further Laboratory Work and one additional Lecture Course.

5. Human Anatomy, including Anthropology: (1) *Intermediate Course*: Six months' Lectures on Systematic Anatomy (Winter Session), with six months' Practical Anatomy. (2) *Advanced Course*: Course of Anthropology.

6. Physiology: (1) *Intermediate Course*: Six months' Lecture Course (Winter Session) and Practical Work (Winter and Summer Session). (2) *Advanced Course*: Laboratory Work (Winter Session).

7. Geology, including Mineralogy: (1) *Intermediate Course*: Winter Lecture Course and Practical Class. (2) *Advanced Course*: Laboratory Work, or Advanced Lecture Course—either Petrology or Mineralogy and Crystallography.

8. Zoology, including Comparative Anatomy: (1) *Intermediate Course*: Six months' Course, including Lectures on Invertebrate Zoology, and on Embryology, with Laboratory Work. (2) *Advanced Course*: Six months' Course on the Morphology of the Invertebrata and Vertebrata, and Laboratory Work.

9. Botany, including Vegetable Physiology: (1) *Intermediate Course*: One Winter and One Summer Course in Laboratory. (2) *Advanced Course*: Laboratory Work, with one or more Lecture Courses.

*The Final Science Examinations must be completed within twelve months.*

#### DEGREE OF DOCTOR OF SCIENCE.

1. Graduates of this University who have held the Degree of B.Sc. for five years may offer themselves for the Degree of D.Sc. Candidates must profess one of the following branches of Science:—Mathematics; Natural Philosophy; Astronomy; Chemistry; Human Anatomy, including Anthropology; Physiology, including Histology; Geology, including Mineralogy; Zoology, including Comparative Anatomy; Botany, including Vegetable Physiology; and in this they will be expected to show a thorough knowledge.

2. Masters of Arts of this University with first or second class honours in Mathematics and Natural Philosophy under the conditions prescribed

by the present Regulations for Degrees in Arts, or under the Regulations previously in force in this University, may offer themselves for the degree of D.Sc. after the expiry of five years from the date of their graduation in Arts, under the same conditions as if they held the degree of B.Sc.

3. Research Students within the meaning of the Regulations for the Encouragement of Special Study and Research and for the appointment of Research Fellows, may offer themselves for the degree of D.Sc. of the University in which they have prosecuted some special study or research, although they have not taken the degree of B.Sc. or the degree of M.A. with honours as aforesaid, in that University; provided—

- (1) That they hold the degree of Bachelor of Science or Bachelor of Medicine of a Scottish or any recognised University, or a degree of any such University, which the Senatus shall hold equivalent to the degree of B.Sc. or to the degree of M.A. with first or second class honours in Mathematics and Natural Philosophy; provided that Candidates who hold any such degree from a University outside the United Kingdom may be required, if the Senatus think fit, before beginning their course as Research Students with a view to the degree of D.Sc., to pass an examination equivalent to an Honours or to a Final Science examination in a group of subjects cognate to their line of work as Research Students.
- (2) That they have spent not less than two winter sessions or an equivalent period as Research Students in the University granting the degree, and that they produce evidence of satisfactory progress in the special study or research undertaken by them during that period.
- (3) That a period of not less than five years shall have elapsed from the date of the graduation required in sub-section (1) of this section.

4. All Candidates for the degree of D.Sc. shall present a Thesis or a published Memoir or Work, to be approved by the Senatus on the recommendation of the Faculty of Science; provided that, if required by the Senatus, the Candidate shall also be bound to pass such an examination conducted orally or practically, or by written papers, or by all of these methods, on the subjects of his special study or of his Thesis, as may from time to time be determined. The Thesis shall be a record of original research undertaken by the Candidate, and shall be accompanied by a Declaration, signed by him, that the work has been done and the Thesis composed by himself.

The Thesis must be lodged with the *Dean of the Faculty of Science* and the fees paid on or before 1st December.

5. Notwithstanding and in supplement of the Regulations as to Examinations, the Senatus Academicus shall appoint such Professors or Lecturers as it may think suitable to conduct the examination of candidates who may offer themselves for the degree of D.Sc., and the



University Court shall, after consultation with the Senatus Academicus, appoint an additional Examiner to act along with them. Such additional Examiner shall be a person of recognised eminence in the subject of the thesis, or memoir, or work which is to be submitted for approval. The result of the examination shall be reported to the appropriate Faculty or Committee of Senatus.

6. The degree of D.Sc. shall in no case be conferred on persons who have not satisfied the conditions hereinbefore set forth, and shall not be conferred *honoris causa tantum*.

7. The fee for examination for D.Sc. is £10, 10s.; for re-examination, £5, 5s.

#### REGULATIONS FOR SPECIAL STUDY AND RESEARCH AND FOR APPOINTMENT OF RESEARCH FELLOWS.

I. The Senatus, with the approval of the University Court, may make regulations under which graduates of Scottish Universities, or of other Universities recognised by the University Court, or other persons who have given satisfactory proof of general education and of fitness to engage in some special study or research, may be admitted to prosecute such study or research in the University.

II. It is the duty of the Senatus in each University—

- (1) To receive and decide upon all applications for admission to prosecute special study or research.
- (2) To prepare a list of all persons admitted as Research Students.
- (3) To make regulations for the supervision of their work.
- (4) To satisfy themselves from time to time that the Research Students are carrying on their work in a satisfactory manner.
- (5) To suspend or exclude from any course any student whose conduct or progress is unsatisfactory.

III. Every applicant must send in to the Senatus a written application stating any degree or other distinction he has obtained, the line of study or research he wishes to prosecute and the probable period of its duration, together with evidence as to his character, capacity, and general qualifications.

IV. Any application shall be in the first instance referred by the Senatus to the appropriate Faculty, or to a Committee appointed by the Senatus; one member of the Committee shall always be a Professor or Lecturer within whose department the proposed line of study or research falls. No applicant shall be recommended by the Faculty or the Committee who has not satisfied them by examination or otherwise that he is qualified to prosecute the proposed line of study or research, and further—

- (a) That his proposed line of study or research is fit and proper;
- (b) That he possesses a good general education;
- (c) That he is of good character;

- (d) That he proposes to prosecute his studies or research during a period to be approved by the Senatus.

The Faculty or the Committee shall report to the Senatus on each application. It shall also be their duty, subject to the regulations of the Senatus, to provide for the supervision of the Research Student's work, and to report at least once a year to the Senatus as to his progress and conduct. The Senatus shall then determine whether he shall remain a Research Student.

V. Every Research Student shall be required to matriculate each year, paying the ordinary fee.

VI. Research Students have the use of the University Laboratories and Museums, under such conditions as the University Court, after consultation with the Senatus, may determine.

VII. The title of Research Fellow may be conferred by the Senatus with the approval of the University Court, on Research Students who have shown special distinction. Such title shall not of itself confer any right to stipend, but it shall be in the power of the University Court to provide a stipend of such amount and for such period as it may think fit to any Research Fellow.

VIII. (1) The Research Fellows shall be appointed after consideration of the report or reports submitted in terms of Section IV.

(2) The title of Research Fellow may be conferred at the commencement of the Research Student's course of study or research, or at any time during its progress, as the Senatus may determine.

(3) Research Fellows shall retain their title and stipend, if any, for the period during which they are engaged in special study or research in the University, and no longer.

(4) Research Students who have been appointed Research Fellows shall continue subject to the above conditions as to the supervision of their work and the reports to be made thereon.

IX. Nothing herein contained shall prejudice the right of Research students to such Fellowships, Scholarships, or Prizes as may be open to them by Ordinance or Deed of Foundation.

X. The University Court may provide such sums as it may think fit in aid of the expenses of Special Study or Research.

#### REGULATIONS FOR THE GRADUATION OF WOMEN AND FOR THEIR INSTRUCTION.

##### EXCERPTS FROM ORDINANCE NO. 18 (GENERAL NO. 9).

1. It shall be in the power of the University Court to admit women to graduation.
2. The conditions for graduation shall be the same for women as for

men, subject to the following modifications, which shall have effect until provision is made for the instruction of women in all subjects qualifying for graduation, in which provision is made for the instruction of men :—

Section 3 of the Regulations for Degrees in Science shall not be applicable to the graduation of women in Science, so long as within the Faculty provision is not made for the instruction of women in any subject qualifying for graduation in which provision is made for the instruction of men, and it shall be in the power of the University Court to admit to graduation women who have received the requisite instruction in that subject in any other Universities or Institutions approved by the University Court, or under teachers recognised by the University Court for purposes of Graduation in Science: Provided always that every candidate for graduation shall produce evidence of having satisfied the conditions with respect to the Preliminary Examination, and shall be examined in all the subjects necessary for graduation by the Examiners of the University.

3. So soon as within the University provision is made for the instruction of women in all subjects qualifying for graduation in which provision is made for the instruction of men, the conditions for the graduation of women shall be the same as the conditions for the graduation of men.

4. (1) Women who attend classes in the University must matriculate, paying a fee of the same amount as that exigible for other students. (2) Women, who are candidates for graduation but not matriculated students, and who may attend classes in Edinburgh, under the provisions above set forth, must, at the commencement of each year of such attendance, enrol their names in a book to be kept in the University for that purpose, paying a Fee of the same amount as the Matriculation Fee paid by students of the University; and having, in respect of such payment a right to the use of the Library of the University.

#### ADDITIONAL REGULATIONS BY THE UNIVERSITY COURT.

Any woman who has received the requisite instruction in Chemistry, Botany, and Zoology, in any other University or Institution already approved by the University with the view to the Graduation of men, or under any teacher already recognised with that view, or in the Medical College for Women, Chambers Street, Edinburgh, will—subject to the provisions of Ordinance<sup>1</sup> No. 18, General No. 9, Regulations for the Graduation of Women, &c.—be admitted to Examination in these subjects for Graduation in Science.

<sup>1</sup> See Ordinance, Appendix to CALENDAR, 1892-93, page 51.

Women may attend within the University the advanced Courses in Botany and Zoology, and the advanced Lecture Courses in the Chemistry Department, qualifying for Graduation in Science.

## OUTLINE OF EXAMINATIONS.

### I.—FIRST EXAMINATION FOR B.SC. IN PURE SCIENCE.

#### (a 1) MATHEMATICS.

Arithmetic—Euclid, Books I., II., III., IV., VI., and XI., or their equivalent, with their application to Mensuration—Algebra, Trigonometry, Conic Sections, Geometrical and Analytical.

*Candidates must show sufficient knowledge in each of the subjects of Examination.*

#### (a 2) ZOOLOGY.

(a) The General Principles of Biology.

(b) The distinctive characters of the Invertebrate groups, and the structure, habits, &c., of Amœba, Paramœcium, Hydra, Lumbricus, Nereis, Hirudo, Anodon, Buccinum, Helix, Nephrops, and Periplaneta.

(c) The distinctive characters of the Vertebrate groups, and the structure, habits, &c., of Gadus, Raia, Rana, Columba, and Lepus.

(d) A general knowledge of the Orders of Vertebrata.

(e) The outlines of the development of Amphioxus, Scyllium, Rana, Gallus, and Lepus, and of the characteristic larval forms of Echinodermata, Crustacea, Annelida, and Mollusca.

(f) The Geographical Distribution of Animals.

#### (a 2) BOTANY.

The characteristic features of the following groups and classes of the vegetable kingdoms:—

Thallophyta Schizophyta, Algae, Fungi; Muscinæ [Hepaticæ, Iusci]; Pteridophyta [Filicineæ, Equisetineæ, Lycopodineæ]; Phanerogamæ [Gymnospermæ, Angiospermæ (Monocotyledones, Dicotyledones)].

The fundamental facts and principles of Organography, Physiology, and Geographical Distribution. The life-history of the following plants:—Bacterium, Nostoc, Spirogyra, Saccharomyces, Mucor, Aspergillus, Agaricus, Collema, Puccinia, Claviceps, Eurotium, Marchantia, Fucus, Polysiphonia, Funaria, Aspidium, Equisetum, Elaginella, Pinus, Cycas, Scilla, Capsella, Helianthus, Ulmus, Tuerkus.

The characters of plants belonging to the chief British natural orders of Phanerogamæ.

### (b) NATURAL PHILOSOPHY.

Elementary Dynamics.

Experimental Physics.

*Candidates must show sufficient knowledge of both subjects.*

### (c) CHEMISTRY.

Chemical changes as distinguished from physical changes. Elements; compounds; mixtures. Laws of chemical combination by weight and by volume. The Atomic theory. Atoms; molecules. Avogadro's Hypothesis. Molecular weights of gaseous and volatile substances. Atomic weights. Law of Dulong and Petit. Chemical Notation—Symbols; formulæ; equations. Simple chemical calculations.

The non-metallic elements and their chief compounds; especially the compounds of oxygen, of hydrogen, and of chlorine with the other non-metals. The more important inorganic acids. The atmosphere. Combustion. Oxidation and reduction.

The following metallic elements and their chief compounds; especially those with oxygen, with chlorine, and with sulphur: Gold, platinum, silver, mercury, lead, antimony, tin, copper, bismuth, zinc, cadmium, iron, aluminium, chromium, manganese, barium, strontium, calcium, magnesium, potassium, sodium.

The following salts: the ammonium salts; the more important sulphates, sulphites, thiosulphates, nitrates, nitrites, carbonates, bromides, iodides, iodates, phosphates, borates, silicates.

The relations of bases, acids, and salts. Electrolysis. Quantivalence. The periodic law.

The metallurgy of silver, mercury, copper, lead, tin, zinc, iron (including cast iron and steel). Alloys, such as brass, bronze, solder, type-metal. Amalgams.

The manufacture of aluminium, magnesium, potassium, sodium, glass, porcelain, mortar, gunpowder, sulphuric acid, sodium carbonate and bicarbonate, caustic soda, bleaching powder and chlorates, white lead.

Classification of Carbon compounds. Marsh Gas and its Homologues. Chloroform. Methyl and Ethyl Alcohols and Ethers. Substituted ammonias and ammonium salts. Formic and Acetic Acids, Aldehyde, Acetone, Chloral, Olefiant Gas, Acetylene, Oxalic Acid, Lactic Acid. Tartaric Acid, Citric Acid. Fats and Oils, Saponification, Glycerine. Cellulose, Sugars, Starch. Distillation of Wood and of Coal. Benzene, Benzoic Acid, Phenol, Salicylic Acid, Oil of Bitter Almonds, Hydrocyanic Acid, Cyanides, Cyanates, Thiocyanates, Urea, Uric Acid.



## PRACTICAL EXAMINATION.

(a) Simple inorganic preparations on a small scale, especially such as involve the formation and decomposition of the commoner salts.

(b) The qualitative examination of single substances. The substances given for examination may be:—Salts in solution; solid salts soluble in water; carbonates, sulphides, and oxides, insoluble in water but soluble in acids; metals. The salts given are confined to those derived from the metals and salt radicals named in the following lists:—

Silver, Mercurous, Mercuric, Cupric, Lead, Stannous, Cadmium, Bismuth, Antimony (*Tartar Emetic* may be given), Arsenious, Zinc, Manganous, Ferrous, Ferric, Chromic, Aluminium, Calcium, Barium, Strontium, Magnesium, Ammonium, Sodium, Potassium.

Carbonate, Sulphite, Thiosulphate, Sulphide, Hypochlorite (Bleaching solution), Nitrite, Chloride, Bromide, Iodide, Cyanide, Sulphate, Chromate, Orthophosphate, Arsenate, Arsenite, Borate, Oxalate, Nitrate, Chlorate, Acetate.

(c) Acidimetry and Alkalimetry.

(For further information see the *Practical Chemistry Class Book* "Salts and their Reactions," published by James Thin.)

## II.—FINAL EXAMINATION.

### (a) MATHEMATICS.

Pure Geometry, Algebra, Theory of Equations, including Determinants, Trigonometry (Plane and Spherical), Analytical Geometry, Differential and Integral Calculus, Calculus of Finite Differences. (The Candidate may, if he please, profess the Elements of Quaternion Analysis.)

### (b) NATURAL PHILOSOPHY.

Experimental Physics; Analytical Dynamics and Thermodynamics; *imperative*.

In addition, two or more branches of Elementary Mathematical Physics (such as Geometrical or Physical Optics, Statical or Voltaic Electricity, Capillarity, &c.). These may be selected by the Candidate.

### (c) ASTRONOMY.

1. The Principles and Practice of astronomically finding the geographical co-ordinates of the place of observation on land and at sea.

2. The Principles that guide the actual determination of the chief astronomical constants—*refraction, aberration, nutation, precession, and solar-parallax* in fixed observatories

3. The methods used for determining the figure and size of the earth.

The Candidate will be required to explain the general principles on which the orbits of planets, etc., are calculated, and must show a

thorough knowledge of the methods followed in the case either of a comet, planet, double-star, or of a meteorite and a meteoric swarm.

One group of observations must have been made in the field, or at an observatory, and fully reduced so as to show the value of the derived results, and the precautions that have been taken to free them from instrumental and personal errors. Candidates will also be examined as to the best ways of testing the critical parts of instruments, such as a pivot, screw, level, &c.

#### (d) CHEMISTRY.

Written and Oral Examinations:—Inorganic Chemistry, including Mineralogical Chemistry; Organic Chemistry; Chemical Crystallography; History of Chemistry.

In the written papers a choice of questions is allowed, so as to adapt the examination to the various courses of advanced study which Candidates may have selected.

Practical Examination:—*Intermediate*: Complex qualitative Analysis; Inorganic preparations; Gravimetric and Volumetric Analysis.

Each Candidate taking the higher standard will also be examined on Organic Preparations, Ultimate Organic Analysis, and one of the following subjects, selected by himself:—Gas Analysis; Assaying; Physico-chemical measurements.

#### (e) HUMAN ANATOMY, INCLUDING ANTHROPOLOGY.

Candidates are required to show a competent knowledge of the development of the human body and of its parts and organs; also the position and general arrangement of the different "systems" of organs which enter into its construction, and the structure both of these organs and of the simple tissues. A special knowledge of the locomotory apparatus and of the nervous and vascular systems will be required. An acquaintance with the technical applications of human anatomy to the practice of Medicine and Surgery is not asked for.

The Anthropological part of the subject will embrace a knowledge of race characters as found in the skull and other parts of the skeleton, in the skin, eyes, hair, features, and the external configuration of the body generally. The methods of anthropometrical measurement both of the living body and of the skeleton should be known. The possible influence of use and of external surroundings in producing modifications in the physical characters of man will require attention. An acquaintance with the "types" of mankind and the structural relations of man to the higher mammals will also be expected.

#### (f) ANIMAL PHYSIOLOGY.

(*Written and Practical Examinations.*)

The minute Structure, Chemical Composition, and Functions of the Tissues and Organs of the Animal Body.

The Chemical Composition and Products of the Foods and Fluids involved in the Processes of Nutrition and Secretion.

In the Practical Examination Candidates may be examined orally on any of the above subjects, and will be required to show a practical acquaintance with the methods employed in Histology, Physiological Chemistry, and Experimental Physiology.

#### (g) GEOLOGY, INCLUDING MINERALOGY

1. *Dynamical Geology*.—The nature and operation of geological agents:—The Atmosphere, Rain, Terrestrial Waters, Ice, the Sea, Plants and Animals, Volcanoes, Movements of the Earth's Crust.

2. *Mineralogy*.—Physical and Chemical characters of the more important and typical species in the various mineral groups—more especially the rock-forming minerals and ores.

3. *Petrology*.—Megascopic and Microscopic Characters, Composition, Origin and Distribution of Rocks.

4. *Structural Geology*.—Structure of Rock-masses, Bedding, Joints, Cleavage, Foliation, Metamorphism, Faults, Unconformity.

5. *Paleontological Geology*.—Characters, and distribution in time, of the more important Genera and Orders, especially those found fossil in Britain.

6. *Physiographical Geology*.—Origin of the present outlines of the Earth's surface.

7. *Stratigraphical Geology*.—The History of the Geological Systems—more especially those of the British Islands.

#### (h) ZOOLOGY, INCLUDING COMPARATIVE ANATOMY.

1. The Systematic Zoology of the Invertebrate and Vertebrate groups.

2. The Elements of the Comparative Anatomy and Development of the Invertebrata and Vertebrata.

3. The Principles of Natural Selection, a Knowledge of the Geographical Distribution of Vertebrate Animals.

The following books are recommended:—Haswell and Parker's "Zoology"; Lang's "Text-Book of Comparative Anatomy"; Huxley's "Vertebrata"; Flower and Lyddeker's "Mammalia"; Vogt and Yung's "Practical Zootomy" (German or French edition); Darwin's "Origin of Species"; Wallace's "Darwinism" and "Island Life"; Marshall's "Embryology."

#### (i) BOTANY, INCLUDING VEGETABLE PHYSIOLOGY.

1. Organography and Physiology of Plants.

2. The Principles of Plant Classification, and the Systematic Characters of the chief Families of Plants, including the Life Histories of representative Types.

3. The chief facts of Geographical Distribution, and the explanation of these.

4. The chief facts of Vegetable Palæontology, and their bearing on the Theory of Descent.

## II.—ENGINEERING.

### REGULATIONS AND CURRICULUM FOR DEGREES IN ENGINEERING.

*Candidates who began attendance on qualifying Science Classes before 1st October 1893, are referred to CALENDAR 1895-96 or previous CALENDARS.*

I. Two degrees in Science in Engineering are conferred by the University of Edinburgh—viz., Bachelor of Science in Engineering and Doctor of Science in Engineering.

#### I.—PRELIMINARY EXAMINATION FOR BACHELOR OF SCIENCE.

II. Every candidate for the degree of B.Sc. in Engineering must pass the Preliminary Examination<sup>1</sup> prescribed for Degrees in Pure Science, and the conditions with respect thereto imposed by the Regulations for Degrees in Pure Science are applicable in all respects to Degrees in Engineering except as follows—viz., Mathematics must be passed on the Higher Standard and the Preliminary Examination must be passed before the candidate presents himself for any part of the First Science Examination, but not necessarily before the candidate enters on his curriculum.

#### II.—COURSES OF INSTRUCTION.

III. (1) Candidates must, in the course of not less than three Academical years (*i.e.* three Winter Sessions, or two Winter Sessions and three Summer Sessions), attend at least the eleven courses of instruction prescribed under Section VIII. hereof.

(2) It is the duty of the Senatus to determine from time to time which of the said courses are full and which are half courses respectively, and also to determine the number of meetings of which such full courses and half courses respectively shall consist, and to report its determination to the University Court for its approval.

IV. (1) Five full courses or their equivalent (counting two half courses as one full course) must be taken in the University of Edinburgh, and must include the necessary courses in Engineering, except where the University Court, after consultation with the Senatus, sees fit to allow one of the courses in Engineering to be taken outside the University under the provisions of the next sub-section.

(2) The remainder of the said courses may be taken in other Uni-

<sup>1</sup> See page 239.

versities or Institutions approved by the University Court, or under teachers recognised by the University Court for purposes of graduation in Science in Engineering :<sup>1</sup> Provided that the fees for attendance at an approved Institution in Edinburgh or under a recognised teacher there are not less than the fees exigible for the corresponding courses in the University of Edinburgh.

V. The University Court may make regulations to enable candidates, not matriculated students of the University of Edinburgh, availing themselves of the permission to attend lectures at approved institutions or by recognised teachers in Edinburgh to obtain, on payment of a fee not exceeding in amount the matriculation fee paid by the students of the University, a right to the use of the Library of the University.

VI. (1) It is the duty of the Professors<sup>2</sup> and Lecturers annually at the end of each winter session to submit to the Senatus a scheme specifying what proportion of the courses shall be devoted to lectures, practical demonstrations, examinations, and tutorial work respectively. The Senatus transmits such scheme, with such observations as it may think fit to make thereon, to the University Court for its approval.

(2) It is the duty of the Professors<sup>2</sup> and Lecturers annually at the end of each winter session to submit to the Faculty of Science, for its consideration, syllabuses of the subjects and books proposed for the work of their classes during the next Academical year. The Faculty of Science transmits such syllabuses, with such observations as it may think fit to make thereon, to the Senatus for its approval.

VII. The provisions of the preceding section do not apply to approved Institutions or recognised teachers outside Edinburgh ; but the University Court will not grant or continue recognition to any Institutions or teachers unless it is satisfied that their courses of instruction are equivalent to the courses sanctioned in the University of Edinburgh.

VIII. The subjects of study are as follows :—

1. Mathematics, including Analytical Geometry, and Differential and Integral Calculus.
2. Natural Philosophy, including Applied Higher Mathematics.
3. Chemistry.
4. A course in the Physical Laboratory or in the Chemical Laboratory, or of Practical Chemistry.
- 5, 6. Two Courses in Practical work in Drawing.
- 7, 8, 9. Three Courses in Engineering, including Engineering Laboratory Practice, and Field Work.
10. Natural Philosophy, involving Higher Mathematics.
11. One of the following :—
  - (a) Engineering Laboratory Practice, Mechanical or Electrical (Special Course).
  - (b) Electricity—Pure and Applied.
  - (c) Geology and Mineralogy.

<sup>1</sup> See footnote 2, page 243.

<sup>2</sup> See Boards of Studies, page 241.



## III.—SCIENCE EXAMINATIONS.

*(a) First Science Examination.*

IX. (1) There is a First Science Examination in the three following subjects, viz.:—(1) Mathematics, (2) Natural Philosophy, (3) Chemistry; and the examinations in Natural Philosophy, and in Chemistry are so far as possible practical.

The examination in Geometrical Drawing may be taken either at the First or at the Final Science Examination.

(2) The examination in Mathematics includes the higher branches of Mathematics specified under Mathematics in the Section immediately preceding; but it is optional to Candidates to pass the same examination in this subject as that required for the ordinary Degree of M.A., provided that in that case they will be required, before graduation, to pass an examination in the remainder of the subject.

(3) Candidates may present themselves in any one or more of the subjects of the First Science Examination at any examination held after they have attended a full course in the subject or subjects professed.

The following Classes in the University qualify for the First Science Examination in Engineering:—

1. Mathematics—Intermediate Honours Class (Winter), or Advanced Class (Summer).
2. Natural Philosophy—As for Pure Science Degrees.
3. Chemistry—As for Pure Science Degrees.
4. Physical or Chemical Laboratories—A three months' Course in either.
5. Drawing—Class of Geometrical Drawing during one Winter Session.

*(b) Final Science Examination.*

X. (1) There is a Final Science Examination in the remaining subjects specified in Section VIII.; and, if required, in the higher branches of Mathematics as provided in Section IX., Sub-section 2.

(2) Candidates may present themselves in one or more of these subjects at any examination after they have passed the whole of the subjects in the First Science Examination and have attended the required courses in the subjects professed, provided that for this purpose subjects 5, 6, 7, 8, and 9, specified in Section VIII., shall form one subject.

XI. A candidate for the degree of B.Sc. in Engineering is not deemed to have attended a class as part of the curriculum for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

XII. It is competent to the Examiners for the degree of B.Sc. in Engineering to report that a candidate has passed with special distinction in one or more of the subjects professed by him; and in such a case a diploma is given setting forth the subjects in respect of which the

degree has been granted, and the subject or subjects in which special distinction has been obtained.

XIII. It is competent to the University Court to modify from time to time the provisions as to the curriculum, in case such modification be rendered desirable by the development of Engineering Science, or in consequence of further provisions having been made within or without the University for the study of any branch of the said Science: Provided that in no case shall the number of full courses of study required be less than the number required for the degree of B.Sc. in Pure Science.

The following Classes in the University qualify for the Final Science Examination in Engineering:—

1. Drawing—Class of Engineering and Mechanical Drawing during one Winter Session.
2. Engineering—(a) Class of Systematic Engineering during two Winter Sessions. (b) Class of Engineering Field-Work, held in Summer.
3. Engineering Laboratory, or Electricity (Pure and Applied), or Geology and Mineralogy—A three months' Course in either.

#### IV.—DOCTORATE OF SCIENCE IN ENGINEERING.

XIV. Graduates of the University of Edinburgh who have held the degree of B.Sc. in Engineering for five years, may offer themselves for the degree of D.Sc. in Engineering.

XV. A candidate for the degree of D.Sc.<sup>1</sup> in Engineering must present a Thesis, or a published memoir or work, to be approved by the Senatus on the recommendation of the Faculty of Science: Provided that, if required by the Senatus, the candidate must pass such examination as may be determined. The Thesis must be a record of original research undertaken by the candidate, or of important engineering work designed by himself, and actually carried out, and must be accompanied by a declaration, signed by him, that these conditions have been satisfied.

#### GENERAL.

XVI. Candidates who produce certificates that they have satisfied all the conditions prescribed by these Regulations, and who have passed the necessary examinations, will be entitled to receive the degrees of B.Sc. in Engineering and D.Sc. in Engineering, as the case may be, on the payment of the fees required.

XVII. A student who, when these Regulations came into operation, had completed a part of his course of study with a view to graduation in Science in Engineering in the University of Edinburgh, under regulations in force at the time, and who thereafter completes his

<sup>1</sup> The Thesis must be lodged with the Dean of the Faculty on or before 1st December.

course of study and passes the necessary examinations in conformity with such regulations, or with the provisions hereof, may become a candidate for the degree of B.Sc. in Engineering.

XVIII. The degrees of B.Sc. and D.Sc. in Engineering are in no case conferred on persons who have not complied with the above conditions, and are not conferred *honoris causâ tantum*.

## OUTLINE OF SUBJECTS OF EXAMINATION.

### FIRST BACHELOR OF SCIENCE EXAMINATION.

1. MATHEMATICS—Two papers, one of two hours and one of three hours, to be taken at one time.<sup>1</sup> Subjects:—Mensuration; Trigonometrical Solution of plane triangles, involving the use of logarithmic tables (to be brought by the candidates). Curve-tracing; Elements of Cartesian and Polar Co-ordinates, including application to the analytical geometry of the straight line and the conic sections; Expansion of a determinant and elements of the theory of equations. Fundamental ideas of the Differential and Integral Calculus; Differentiation and Integration of Simple Functions; Geometrical Interpretation of Differentiation and Integration; Elementary application to plane curves, maxima and minima of functions of one variable, areas, volumes, centres of mass and moments of inertia; Simple Differential Equations.
2. NATURAL PHILOSOPHY, mainly Practical Physics.
3. CHEMISTRY—Same as for First Examination in Pure Science.

### SECOND BACHELOR OF SCIENCE EXAMINATIONS.

1. (a) ENGINEERING—  
*Field-Work*.—Surveying; Levelling; Setting out of Work; Calculation of Quantities.  
*Properties of Materials*.—General Properties, with special knowledge of their Strength, and the Purposes to which they are applied, and some knowledge of their Cost.  
*Strength and Stability of Structures designed by Civil Engineers*.—Metal and Timber Bridges and Roofs. Arches in Masonry. Walls. Retaining Walls. Embankments. Cuttings. Breakwaters. Aqueducts. Pipes. Canals.  
*Strength and Form of the Elements of Machines*.  
*Design of Combined Structures*.—An elementary knowledge of the Design of Bridges and Roofs, of Reservoirs, Embankments, collecting and distributing Machinery of Waterworks, and of the main features of Railway construction, Harbours, and Drainage.  
*Design of Machinery*.—An elementary knowledge of the construction

<sup>1</sup> A candidate who has passed the M.A. Examination in Mathematics is exempted from the first of these papers.

of the Steam Engine, stationary and locomotive, of Prime Movers driven by Water, of Mill-wright work, and the general arrangement of Workshops and Factories.

*Prime Movers.*—Theory of Heat Engine. The Hot Air Engine. The Steam Engine. The Gas Engine. Turbines and Water Wheels.

*Power Transmission.*—Telodynamic, Hydraulic, Electric.

*Engineering Laboratory Practice.*

(b) DRAWING—

Candidates must exhibit a good knowledge of Geometrical Drawing, including the use of Graphics as applied in the solution of Engineering problems, and be able to represent neatly, in the usual manner employed by engineers, Plans and Sections of Buildings and Machinery, and also to make Engineering Sketches with figured dimensions from actual objects.

2. NATURAL PHILOSOPHY—

*Applied Mathematics, chiefly Dynamics.*

3. (a) ENGINEERING LABORATORY PRACTICE, MECHANICAL OR ELECTRICAL.

(b) ELECTRICITY—PURE AND APPLIED.

(c) GEOLOGY AND MINERALOGY—

*Dynamical Geology.*—Nature and Operation of geological agents :—The Atmosphere, Rain, Terrestrial Waters, Ice, the Sea, Plants and Animals, Volcanoes, Movement of the Earth's Crust.

*Mineralogy.*—Physical and Chemical characters of the more important and typical species in the various mineral groups—more especially the rock-forming minerals and ores.

*Petrology.*—Megascopic and Microscopic Characters, Composition, Origin and Distribution of Rocks.

*Structural Geology.*—Structure of Rock-Masses, Bedding, Joints, Cleavage, Foliation, Metamorphism, Faults, Unconformity.

*Physiographical Geology.*—Origin of the present outlines of the Earth's surface.

### DOCTOR OF SCIENCE EXAMINATION.

A Candidate for this Degree will be required to offer a thesis or published memoir affording evidence of original work, and may also be required to pass a Special Examination. See page 259.

## III.—PUBLIC HEALTH.

### IV. REGULATIONS AND CURRICULUM FOR DEGREES IN PUBLIC HEALTH.

*Candidates who commenced attendance on qualifying Science Classes before 1st October 1894 are referred to the CALENDAR for 1895-96, or to previous CALENDARS.*

I. Two degrees in Science in Public Health are conferred by the University of Edinburgh, viz., Bachelor of Science in Public Health and Doctor of Science in Public Health.

I.—BACHELOR OF SCIENCE.

II. Candidates for the degree of B.Sc. in Public Health must be graduates in Medicine of a University of the United Kingdom, or of some other University recognised for the purpose by the University Court of the University of Edinburgh.<sup>1</sup>

III. Candidates must be matriculated for the year in which they appear for examination or graduation.

(A)—*First Examination.*

IV. Candidates for the degree of B.Sc. in Public Health, before proceeding to the first examination, must produce evidence (1) that, after their graduation in Medicine, they have worked for at least twenty hours per week during a period of not less than eight months, of which at least five consecutive months must be in the Public Health Laboratory of the University of Edinburgh, and the remainder in the foresaid Laboratory, or in a Public Health Laboratory recognised for the purpose by the University Court;<sup>2</sup> and (2) that they have attended in the University of Edinburgh or any other Scottish University, in addition to the course of lectures in Physics qualifying for graduation in Medicine, such further course in Physics as the Senatus Academicus, with the approval of the University Court, shall deem necessary, and such a course of lectures in Geology, extending over not less than three months, as the Senatus with the like approval shall deem sufficient and appropriate.

The Courses in this University which at present qualify are the ordinary Courses in Physics and Geology.

(B)—*Second Examination.*

V. Candidates for the degree of B.Sc. in Public Health are not admitted to the second examination for the degree sooner than eighteen months after having taken their degree in Medicine, nor sooner than six months after having passed their first examination for the degree of

<sup>1</sup> *Universities specially recognised under this section*:—The University of Würzburg; McGill University, Montreal; University of Harvard, U.S.A., 14th Oct. 1899; Queen's College, Kingston, Ontario, Canada, 18th December 1899.

<sup>2</sup> *Public Health Laboratories and Teachers recognised under this section*:—

University, Birmingham, . . . . .	{ E. Percy F. Frankland, Ph.D.,
	October 1894.
Liverpool School of Science and Technology, . . . . .	{ George Tate, Ph.D., 15 June 1891.
King's College, London, . . . . .	{ W. R. Smith, M.D., D.Sc.,
	November 1891.
University of Aberdeen, . . . . .	{ Professor Matthew Hay, M.D.
	15 February 1891.
Pasteur Institute, Paris, . . . . .	22 October 1892.
University of Cambridge, . . . . .	13 December 1897.



B.Sc. in Public Health, and they must have attended two separate courses in Public Health in the University of Edinburgh, or in any University of the United Kingdom, or any Indian, Colonial, or Foreign University recognised for the purpose by the University Court, or in such Medical School or under such teacher as may be recognised or approved for the purpose by the University Court, each course consisting of forty lectures at least; one of these courses shall deal with Medicine and the other with Engineering, each in its relation to Public Health, in such manner as the Senatus Academicus, with the approval of the University Court, shall determine.

They must also give evidence (1) that for six months they have practically studied sanitary work under the Medical Officer of Health of a county or burgh or district, containing a population of not less than 25,000; (2) that they have had three months' clinical instruction regarding fevers and infectious diseases in a hospital recognised as suitable for the purpose by the University Court; and (3) that they have had three months' instruction in Mensuration and Drawing under a teacher recognised for the purpose by the University Court.

The lectures in this University which qualify are—(1) Advanced Course of Public Health and Sanitary Science by the Professor of Public Health; and (2) the course of instruction (Theoretical and Practical) in Sanitary Engineering and Building Construction by the Professor of Engineering, and the Class of Mensuration and Drawing by the Lecturer on Drawing.

VI. There is a first examination for the degree of B.Sc. in Public Health in (1) Laboratory Work, the examination being practical, written, and oral; (2) in Physics; and (3) in Geology, if an examination in Physics or Geology, as the case may be, qualifying for graduation either in Science or Arts has not previously been passed by the candidate.

VII. There is a second examination, written, oral, and as far as possible practical, for the degree of B.Sc. in Public Health in the following subjects, included in the course of instruction in Public Health—viz. (1) Sanitation, (2) Sanitary Law, (3) Vital Statistics, and (4) Medicine in its bearings on Public Health, and the examinations in these subjects are taken at one time. The examination in Sanitation, provided for under this section, shall include Reports by the candidates on Dwellings, Workshops, Hospitals, and Sanitary Schemes generally.

VIII. The Board of Studies for the Faculty of Science from time to time, with the approval of the Senatus, determines and announces the character of the instruction to be given in the Laboratory, and fixes the standard of the examinations.

IX. It is competent for the University Court, after consultation with

<sup>1</sup> See Boards of Studies, page 241.

the Senatus, to modify from time to time the provisions as to the work and instruction hereinbefore specified as necessary for graduating in Science in Public Health, in case such modification may be rendered desirable by the development of the Science of Public Health, or by increase of the facilities provided in the said University or elsewhere for the study of any branch of the said Science.

## SCHEDULES OF THE SUBJECTS OF EXAMINATION.

### LABORATORY WORK.

(1.) *Examination of Water.*—Physical Properties, Chemical Properties, Microscopical Appearances, Pollution of Potable Waters.

(2.) *Examination of Air.*—Temperature, Pressure, Humidity; Carbonic Acid, Ozone, Micro-organisms, Organic Matter, Noxious Emanations.

(3.) *Examination of Foods.*—Milk, Butter, Butterine, or Oleomargarine, Flour, Bread, Starchy foods, Sugar, Honey, Butcher meat, Fish, Vegetables.

(4.) *Examination of Beverages.*—Tea, Coffee, Cocoa, Alcoholic Beverages, Aërated Waters.

(5.) *Examination of Condiments.*—Salt, Pepper, Mustard, Vinegar, and Preserves; Examination of Lime Juice. Nutritive Value of Dietaries.

(6.) *Sewage.*—Examination of sewage and of effluents after treatment.

(7.) *Soils.*—Temperature, Humidity, Permeability, Chemical Composition, Gases of the Soil, Micro-organisms.

(8.) *Disinfectants and Deodorisers.*—Chemical Examination of the Materials, Determination of their comparative power.

(9.) *Building Materials.*—Chemical and Physical Properties.

(10.) *Clothing.*—Physical Properties of Clothing Materials.

(11.) *Bacteriology.*—Micro-organisms in relation to Epidemic and other Diseases. Culture and recognition of Pathogenic and Non-Pathogenic, Aerobic and Anaerobic, Micro-organisms.

### PHYSICS.

(1.) *Laws of Motion and Properties of Matter.*—Elasticity, Density, Porosity, Divisibility, Viscosity, &c.

(2.) Elements of Dynamics of Solid and Fluid Bodies; Tides.

(3.) Elementary Experimental Facts regarding Energy in the common phenomena of Sound, Light, Heat, Electricity, and Magnetism.

### GEOLOGY.

(1.) *Dynamical Geology.*—The nature and operation of Geological agents:—The Atmosphere, Rain, Underground Water, Rivers, Ice, the Sea, Plants and Animals, Volcanoes, Movements of the Earth's Crust.

(2.) *Mineralogy and Petrology.*—Characters of the more common and widely-distributed minerals and rocks.

(3.) *Structural Geology.*—The structure of rock-masses, more especi-

ally Bedding, Joints, Faults, Intrusive Rocks. Water-supply and Draining in connection with Geological Structure. Nature and Origin of Soils and Sub-Soils.

EPIDEMIOLOGY [MEDICINE IN ITS RELATION TO PUBLIC HEALTH].

The Causes of Endemic and Epidemic Diseases, as well as of Epizootics; of the Contagious or Infectious Diseases; and of those incidental to particular trades, or otherwise produced by the surroundings of the patient. Prophylaxis. Immunity. Vaccination against disease. Nature and Value of Vaccines.

SANITATION.

(1.) *Site, Environment, and Construction of Dwellings*.—Influence of Position, Aspect, and Climate; Meteorological and Geological Conditions; Soil and Drainage; Elements of Building Construction.

(2.) *Water Supply*.—Quantity per head; Relative Eligibility of available Sources of Supply; Estimation of yield; Methods of utilising various Sources of Supply; Storage, Subsidence, and Filtration; Distribution—(α) General, (β) Domestic; Causes, Detection, and Treatment of contaminated Supply.

(3.) *Air Supply*.—Quantity and Temperature, with knowledge of use of instruments employed in their Measurement; Causes and Detection of Impurities; Warming and Ventilation; Characteristics and Fitness of various methods in use.

(4.) *Excreta, Refuse, and Sewage*.—Character and Quantity of in (α) Urban, (β) Rural Districts—

A. Collection and Removal from (1) the Dwelling, (2) the Town or Village; Nature, Practical details, and maintenance of the several methods employed.

B. Disposal: (1) Sanitary, (2) Insanitary methods; Precipitation, Filtration, Irrigation, Discharge; General details of necessary works.

(5.) *General Structural and Mechanical Details of Sanitary Works*.—Character, Fitness, and Qualities of Materials (Brick, Cement, Earthenware, Iron, Lead); Design, setting out, and laying of Sewers; Plumbing and Iron-work.

(6.) *Hospitals*.—Principles of Design and Construction.

(7.) *Infectious and Epidemic Diseases*.—Origin, Modes of Propagation, and Means of Prevention; Epizootics.

(8.) *Disinfectants*.—Selection and application.

(9.) *Effects of Insanitary Conditions*.—Insufficient house accommodation, Vitiating of Air, Impure Water, Bad or insufficient Food.

(10.) *Unhealthy Occupations*.—Means of mitigating or removing their unhealthiness.

(11.) *Nuisances*.—Urban, Rural, and Domestic.

(12.) *Disposal of the Dead*.—Burial, Cremation.

*N.B.*—Candidates are required to be able to interpret plans sub-

mitted to them, and to illustrate their answers when necessary by sketches.

#### SANITARY LAW.

1. Sanitary Administration. Laws affecting Factories, Workshops, Mines, Common Lodging-houses, Removal of Refuse, Nuisances, Rivers Pollution, Alkali Works, Burial Grounds, Unwholesome Food, Adulteration of Food and Drugs. Sale of Poisons.

#### VITAL STATISTICS.

2. Methods of estimating Population. Death, Birth, and Marriage Rates. Mortality as affected by Age, Sex, and Occupation. Case Mortality. Life Tables.

NOTE.—In making calculations, the Candidate will be expected to understand the use of Logarithms, the Slide Rule, and Arithmometer.

### II.—DOCTORATE OF SCIENCE.

X. Graduates who have held the degree of B.Sc. in Public Health from the University of Edinburgh for a term of five years may offer themselves for the degree of D.Sc. in Public Health in the said University.<sup>1</sup>

XI. Candidates for the degree of D.Sc. in Public Health must present a thesis, or a published memoir or works,<sup>2</sup> to be approved by the Senatus, on the recommendation of the Faculty of Science, and are required to pass an examination in Public Health, and in such of its special departments as the Senatus, with the approval of the University Court, may determine. [Candidates for D.Sc. in Public Health may appear for examination in any one of the departments of knowledge required for the degree of B.Sc. in Public Health. They are required to submit the subject in which they propose to be examined for approval at least two months before the date of the Examination.<sup>2</sup>]

The theses, or published memoirs or works, must be records of original research undertaken by the candidates, and must be accompanied by a declaration, signed by them, that the work has been done and the theses or memoirs composed by themselves.

#### GENERAL.

XII. Candidates who produce certificates that they have satisfied all the conditions prescribed by this Ordinance, and who have passed the necessary examinations, are entitled to receive the degrees of B.Sc. in Public Health and D.Sc. in Public Health, as the case may be, on payment of the fees required.

XIII. Students who, at the time when these Regulations come into operation, have completed a part of their course of study with a view to graduation in Science in Public Health in the University of Edinburgh, under regulations in force at the time therein, and thereafter

<sup>1</sup> See also Regulations for Research Students taking D.Sc., Section 3, page 247.

<sup>2</sup> The Thesis must be lodged on or before 1st December, and the Subject of Examination must be submitted to the Dean before 20th January. The Examination will take place about the end of March.

completes the course of study and passes the necessary examinations in conformity with such regulations, or with the provisions hereof may become candidates for the degree of B.Sc. in Public Health.

XIV. The degrees of B.Sc. and D.Sc. in Public Health are in no case conferred on persons who have not complied with the conditions hereinbefore set forth, and are not conferred *honoris causâ tantum*.

#### IV.—AGRICULTURE.

##### REGULATIONS AND CURRICULUM FOR GRADUATION IN AGRICULTURE.

*Candidates who began attendance on Qualifying Science Classes before 1st October 1893, are referred to CALENDAR 1895-96, or to previous CALENDARS.*

I. A degree of Bachelor of Science in Agriculture is conferred by the University of Edinburgh.

##### I. PRELIMINARY EXAMINATION.

II. Every candidate for the degree of B.Sc. in Agriculture must pass the Preliminary Examination<sup>1</sup> prescribed for Degrees in Pure Science; and the conditions imposed with respect thereto by the said Regulations are applicable in all respects to the Degree in Agriculture, except as follows:—The Preliminary Examination must be passed before the candidate presents himself for any part of the First Science Examination, but not necessarily before the candidate enters on his curriculum.

##### COURSES OF INSTRUCTION.

III. (1) Candidates must, in the course of not less than three Academical years (*i.e.* three Winter Sessions, or two Winter Sessions and three Summer Sessions), attend at least eleven courses of instruction in subjects prescribed for examination under Section VIII. hereof.

(2) It is the duty of the Senatus to determine from time to time which of the said courses are full courses and which are half courses respectively, and also to determine the number of meetings of which such full courses and half courses respectively shall consist,<sup>2</sup> and to report its determination to the University Court for its approval.

IV. (1) Five full courses or their equivalent (counting two half courses as one full course) must be taken in the University of Edinburgh, and must include the course in Agriculture and Rural Economy.

(2) The remainder of the said courses may be taken in other Universities or Institutions approved by the University Court, or under teachers recognised by the University Court for purposes of graduation in Science in Agriculture:<sup>3</sup> Provided that the fees for attendance at an approved institution in Edinburgh or under a recognised teacher there must not

<sup>1</sup> See page 230.

<sup>2</sup> See Boards of Studies, page 241.

<sup>3</sup> See footnote 1, page 243.



be less than the fees exigible for the corresponding courses in the University of Edinburgh.

(3) Residence and practical work at a farm is required of each candidate to such an extent and under such regulations as the Senatus, with the approval of the University Court, may from time to time appoint.<sup>1</sup>

V. The University Court may make regulations to enable candidates, not matriculated students of the University of Edinburgh, availing themselves of the permission to attend lectures at approved Institutions or by recognised teachers in Edinburgh, to obtain, on payment of a fee not exceeding in amount the matriculation fee paid by the students of the University, a right to the use of the Library of the University.

VI. (1) It is the duty of the Professors and Lecturers annually, at the end of each winter session, to submit to the Senatus a scheme specifying what proportion of the courses is to be devoted to lectures, practical demonstrations, examinations, and tutorial work respectively. The Senatus transmits such scheme, with such observations as it may think fit to make thereon, to the University Court for its approval.

(2) It is the duty of the Professors and Lecturers annually at the end of each winter session to submit to the Faculty of Science, for its consideration, a syllabus of the subjects and books proposed for the work of their classes during the next Academical year. The Faculty of Science transmits such syllabus, with such observations as it may think fit to make thereon, to the Senatus for its approval.

VII. The provisions of the preceding section do not apply to approved institutions or recognised teachers outside Edinburgh; but the University Court will not grant or continue recognition to any Institutions or teachers unless it is satisfied that their courses of instruction are equivalent to the courses sanctioned in the University of Edinburgh, where such exist.

VIII. The subjects of study are as follows<sup>2</sup> :—

1. Mathematics, or Biology (*i.e.* Zoology and Botany).
2. Natural Philosophy.
3. Chemistry.
4. Agriculture and Rural Economy.
5. Agricultural Chemistry.
6. Geology.
7. Veterinary Hygiene.
8. Agricultural Entomology.
9. Economic Science as applied to Agriculture.
10. A course in one of the following :—(a) Forestry; (b) Experimental Physics; (c) Engineering.
11. Engineering Field Work.

<sup>1</sup> Residence and Practical work at a farm must be not less than twelve months.

<sup>2</sup> See footnote 1, page 243.

## II. SCIENCE EXAMINATIONS.

### (a) *First Science Examination.*

IX. (1) There is a First Science Examination in the three following subjects—viz. (1) Mathematics, or Biology (*i.e.* Zoology and Botany); (2) Natural Philosophy; (3) Chemistry.

(2) The examination in all these subjects is the same as the examination in these subjects for the degree of B.Sc. in Pure Science, as specified in the Regulations therefor.

The following courses in this University qualify for the First Science Examination in Agriculture:—

1. (1) Senior Mathematics of 100 Lectures, as for the degree in Pure Science, or (2) Biology (Zoology, Botany) as for Pure Science.
2. Natural Philosophy, as for Pure Science.
3. Chemistry, full course, including Practical Chemistry, as for Pure Science.

(3) Candidates may present themselves in any one or more of the subjects of the First Science Examination at any examination held after they have attended a full course in the subject or subjects professed.

### (b) *Final Science Examination.*

X. (1) There is a Final Science Examination in the remaining subjects (4 to 11 inclusive) specified in Section VIII. hereof.

(2) Candidates may present themselves in any one or more of these subjects at any examination held after they have passed the whole of the subjects comprised in the First Science Examination, and have attended the required courses in the subjects professed.

The following courses qualify for the Final Science Examination in Agriculture:—

1. Agriculture and Rural Economy—Full course of about 100 Lectures and 10 Field Demonstrations.
2. Agricultural Chemistry—Full course (including Lectures and Practical Work) of about 100 hours.
3. Geology—Half-course of 25 Lectures, 10 Demonstrations in laboratory, and 8 Field Demonstrations.
4. Veterinary Hygiene—Half-course of about 50 Lectures.
5. Agricultural Entomology—Half-course of about 20 hours.
6. Economic Science, as applied to Agriculture—Half-course of about 50 Lectures—the Political Economy Class in Arts till Christmas.
7. A course in one of the following:—
  - (a) Forestry—Full course of about 100 Lectures.
  - (b) Experimental Physics—Full Laboratory course of 100 hours.
  - (c) Engineering—Full course of about 100 hours.
8. Engineering Field Work:—Half-course, extending over three weeks, 75 hours—Lectures, Drawing Office, and Field.

XI. If a student, before passing the Preliminary Examination, has attended a class qualifying for graduation, the Senatus may, on special

cause shown, permit him to count such class for graduation, on condition of his passing the full Preliminary Examination within such time thereafter as the Senatus may appoint, and in every such case the Senatus reports to the University Court the reasons for the relaxation.

XII. A candidate for the degree of B.Sc. in Agriculture shall not be deemed to have attended a class as part of the curriculum for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

#### GENERAL.

XIII. Candidates who produce certificates that they have satisfied all the conditions prescribed by these Regulations, and who have passed the necessary examinations, will be entitled to receive the degree of B.Sc. in Agriculture, on payment of the fees required.

XIV. A student who, at the time when these Regulations came into operation, had completed a part of his course of study with a view to graduation in Science in Agriculture in the University of Edinburgh, under regulations in force at the time therein, and who thereafter completes his course of study and passes the necessary examinations in conformity with such regulations, or with the provisions of these Regulations, may become a candidate for the degree of B.Sc. in Agriculture.

XV. The degree of B.Sc. in Agriculture shall in no case be conferred on persons who have not complied with the conditions hereinbefore set forth, and shall not be conferred *honoris causâ tantum*.

### OUTLINE OF SUBJECTS OF EXAMINATION.

#### FIRST BACHELOR OF SCIENCE EXAMINATION.

1. (a) MATHEMATICS, or (b) BIOLOGY (*i.e.* ZOOLOGY and BOTANY).
2. NATURAL PHILOSOPHY.
3. CHEMISTRY, including Practical Chemistry.

The Examinations are the same as for the First B.Sc. in Pure Science.

#### FINAL BACHELOR OF SCIENCE EXAMINATION.

#### 1. AGRICULTURE AND RURAL ECONOMY : ITS SCIENTIFIC PRACTICE.

1. *Definition of Agriculture.*—Aid given by the Allied Sciences.
2. *Surface Geology.*—Formation and Classification of Soils—their

Physical and Chemical Properties. Importance of Organic Nitrogen. Indications of good or bad Soils—the Methods of Management.

3. *Drainage and Cultivation*.—Practice and Advantages of Drainage—Irrigation—Wet-Warping—Mixing or Top-Dressing—Claying—Marling—Chalking—Liming—Paring and Burning—Clay-Burning. The Effect on Soils of Cultivation and the Growth of Plants.

4. *Implements and Machines of the Farm*.—The Importance of their proper Construction and Careful Management.

5. *Steam Cultivation*.—Its Advantages and Disadvantages—Development of the “Darby” Land Digger.

6. *The Motive Powers Employed on the Farm*.—1st, Man; 2d, Horse; 3d, The Mechanical Powers (Water, Wind, and Steam)—their Comparative Values and Advantages.

7. *Farm Servants*.—Their Labour and Wages—Day-work and Piece-work. Detailed and total costs of Horse and Hand Labour.

8. *The Importance of Rotations*.—Different Rotations and reasons why they are adopted—Systems of Farming.

9. *Our Farm Crops* (Grain, Root, Forage, and Hay Crops).—Their Selection and Growth—Prevention of Insect Injuries and Diseases.

10. *Identification of Grasses and other Valuable Pasture Plants*.—Character and Habits of those of importance—Detection of Adulterations.—Regulations necessary to protect the Farmer in buying Seeds.

11. *The Management of Permanent Pasture*.—Proper Methods of making new Pasture—its After-treatment.

12. *Weeds in Pastures and Means of Destroying them*.

13. *Silage and the System of Ensilage*.—Its Advantages, &c.—Its Suitability and Unsuitability according to Locality.

14. *Manures*.—Farm-yard Manure—its proper Mixing, Storing, and Application—its great advantage as a General Manure. Special Manures and so-called Artificials—their Uses, Abuses, and Adulterations—the proper Times and Methods of their Application. The Value and Use of Liquid Manure and Town Sewage.

15. *Buildings and Fences*.—The proper Construction of Fences—the General Arrangement of Farm-Buildings—the best Flooring and Inside Plans and Dimensions of Byres, Cattle-Sheds, Stables, &c.—Covered Yards—Ventilation—Drainage of Houses and Farm-yards.

16. *Live-Stock, embracing Cattle, Pigs, Horses, Sheep*.—The Various breeds of each, and suitability of some to Local Conditions—“The Principles of Breeding.” Feeding and Management—Cost of Feeding—Proper Mixtures of Food to Use. Cost of the Production of a Stone Beef, Mutton, and Pork, showing the Amount of Profit in each Case.

17. *Dairying in all its Branches*, including the suitability or otherwise of surrounding Conditions—the proper Classes of Dairy Stock to keep, and their Management—the Treatment of Milk, and its Sale or Manufacture into Cheese, Butter, &c.

18. *Feeding Stuffs*.—Suitability of the Common Food Substances to

the Different Classes of Farm Stock—The Purchase, Storing, and Administration of the same—their Manūrial Residues.

## 2. AGRICULTURAL CHEMISTRY.

1. *Atmosphere*.—Relation of its Constituents and Conditions to Plant Life.

2. *Soils*.—Origin, Formation, Composition, Biology, Amelioration.

3. *Plants*.—Constituents, Germination, Nutrition, Maturation, Symbiosis.

4. *Manures*.—Nature, Uses, Application, Valuation, Compatibility, Exhaustion.

5. *Crops*.—Classification, Relation, Preservation, Uses as Fodder, Residual Value.

6. *Animal Nutrition*.—Nutritive Processes, Laws of Flesh and Fat Production, Digestibility of Fodders, Nutrient Ratio, Relation of Food to Work and to Manure.

7. *Dairy*.—Composition of Dairy Products, Circumstances affecting Quantity and Quality, Scientific Management.

Tests for the detection of Potassium, Sodium, Ammonium, Magnesium, Calcium, Aluminium, Iron, Arsenic, Antimony, Copper, Lead, Mercury.

Sulphate, Sulphite, Sulphide, Phosphate, Carbonate, Nitrate Chloride, Acetate, Oxalate, Tartrate, Citrate.

Sugars, Starches, Fats, Proteids.

Chemical, Physical, and Microscopic Tests for Adulteration in Manures, Feeding Stuffs, and Dairy Produce.

Methods of determining of Clay, Sand, Carbonates, Humus, and Moisture in Soils.

Phosphoric Acid, Potash, Nitrogen, Lime, Magnesia, Insoluble Matter and Moisture in Soils and Manures.

Albumen, Amides, Fat, Carbohydrates, Woody Fibre, and Ash in Fodders.

## 3. GEOLOGY.

(1) *Physical Geography and Dynamical Geology*.—The nature and operation of Geological agents:—The Atmosphere, Rain, Underground Water, Rivers, Ice, the Sea, Life, Earthquakes, Volcanoes, Movements of Upheaval and Depression.

(2) *Mineralogical and Petrological Geology*.—Characters of the principal Rock-forming Minerals: Composition, Origin, and Distribution of the more important and commonly occurring Rocks.

(3) *Structural Geology*.—The Structure of Rock-masses, more especially Bedding, Joints, Faults, and Denudation.

(4) *Agricultural Geology*.—Nature and Origin of Soils and Subsoils; Draining in connection with Geological Structure; Mineral substances used as Manures.



#### 4. VETERINARY HYGIENE.

1. The Comparative Osteology (rudimentary) of the Horse, Ox, and Sheep.
2. The Physiology of Dentition in Horse, Ox, Sheep, and Pig, more especially as indicative of the Age of the Animal.
3. The Physiology of Gestation ; the Diseases incidental to the pregnant state, and also those consequent to the act of parturition.
4. Description of the Digestive Organs of the Horse, Ox, and Sheep (separately), also their Physiology, and most ordinary Diseases.
5. Contagious and other Diseases of Farm Stock. Prevention and Treatment of Diseases.

#### 5. AGRICULTURAL ENTOMOLOGY.

Insect pests of cultivated plants and of farm live stock. Methods of prevention of, and of remedy for, their attacks. Classification of insects, and details of their structure and life history, in so far as of economic importance.

#### 6. ECONOMIC SCIENCE.

See Syllabus in Arts. First Half of Course.

#### 7. (a) FORESTRY.

1. *Sylviculture*.—Atmosphere, Climate, and Soil, as affecting Forest Vegetation ; shape and development of forest trees ; pure and mixed woods ; the sylvicultural systems ; formation and tending of woods.
2. *Injuries to Standing Woods and their Protection*.—Winds and storms, fires, animals, fungi, weeds, frost, snow, drought, &c.
3. *Utilisation of Produce*.
4. *Structure, Classification, and Technical Properties of Timber*.
5. *Forest Organisation*.—The principles on which working plans are based.
6. *Uses and Effects of Forests*.

#### 7. (b) EXPERIMENTAL PHYSICS.

The Measurement of Physical Constants, such as—Gravitation, Specific Gravity, Specific Heat, Conductivity, Dilatation, Refractive Index, Magnetic and Electric Quantities, &c.

#### 7. (c) ENGINEERING.

1. *Mechanics*.—(a) Principles of Statics ; couples ; moments of forces ; parallel and inclined forces ; centre of gravity ; moments of inertia ; friction, (b) Principles of Kinematics and Kinetics ; Newton's laws of motion ; Conservation and transformation of energy.

2. *Strength and Properties of Structural Materials*, including their fitness and adaptability, together with some knowledge of their cost.

3. *Strength and Stability of Structures*.—General knowledge of the design, construction, and maintenance of Roads, Roofs, Bridges, Embankments, Retaining Walls, Aqueducts, and General Buildings.

4. *Hydraulics*.—The laws governing the flow of water in open and closed channels, and its discharge through orifices ; Systems of Drainage and Irrigation ; Pumps, &c.

5. *Mechanism and Machinery*.—General Principles and means of transmission, conversion, and modification of motion ; general millwright work with special reference to the machines ordinarily employed for agricultural purposes.

6. *Prime Movers*.—A knowledge of the sources and modes of estimating power ; The Steam Engine ; Pneumatic Machines ; Hydraulic Motors, Water-wheels, Turbines, &c.

## 8. ENGINEERING FIELD WORK.

Surveying, with special reference to Estate and Parish Surveying, Levelling, Gauging of Streams and Rivers, Plotting of Surveys and Sections, Setting out of Work, and Calculation of Quantities.

## FEEES FOR EXAMINATIONS FOR DEGREES.

### I. PRELIMINARY EXAMINATION.

The Fee is 10s. 6d. for each appearance.

### 2. FEES FOR EXAMINATIONS OR FOR REGISTERING EQUIVALENTS.

#### (1) *Pure Science and Engineering*—

First B.Sc. Examination, . . . . .	£3 3 0
(or for each subject, £1, 1s.)	
Second B.Sc. Examination, . . . . .	3 3 0
Doctor of Science, . . . . .	10 10 0
	<hr/> £16 16 0

#### (2) *Public Health*—

First B.Sc. Examination, . . . . .	£3 3 0
Second B.Sc. Examination, . . . . .	3 3 0
For the Degree of Doctor, . . . . .	10 10 0
	<hr/> £16 16 0

#### (3) *Agriculture*—

First B.Sc. Examination, . . . . .	£3 3 0
(or for each subject, £1, 1s.)	
Second B.Sc. Examination, . . . . .	3 3 0
	<hr/> £6 6 0

Candidates for the Degree of B.Sc. who fail to pass pay a fee of 10s. 6d. for re-examination in each subject, and Candidates for D.Sc. pay a fee of £5, 5s. for each re-examination.

Every Candidate for Graduation must pay the Fee of £1 for Registration as a Member of the General Council of the University, at least one clear day before the date of Graduation.

All communications relating to the Curriculum and Examinations for Degrees, Fellowships, Scholarships, &c., in Science should be addressed to *The Dean of the Faculty of Science*, University, Edinburgh.

All Examination, Matriculation, and Registration Fees are payable at the *Matriculation Office*, University. Candidates may pay the Fees personally, or transmit them to T. GILBERT, by *Post Office*, or *Postal Orders*, or by *Bank Drafts*, crossed "Union Bank of Scotland (Hunter Square Branch), Edinburgh," but not by cheques on private accounts.

## TIME-TABLE OF EXAMINATIONS AND DATES FOR PRESENTING CERTIFICATES AND PAYMENT OF FEES.<sup>1</sup>

*Candidates are required to enter for each periodical examination at which they desire to appear, and to state the subject or subjects in which they desire to be examined.*

The dates of the Examinations for 1901-1902 have been fixed as follows, and Candidates are required to assemble in the Examination Hall at the University a quarter of an hour before the time fixed for examination:—

### PRELIMINARY EXAMINATION.<sup>1</sup>

1901.

- |           |      |   |
|-----------|------|---|
| Sept. 18. | Wed. | Names to be given in, and Fees paid, <i>on or before</i> this date.                               |
| ,, 27.    | Fri. | English, 1st paper, 9-11; Higher Latin, 1st paper, 12-2; Lower Latin, 3-6.                        |
| ,, 28.    | Sat. | English, 2nd paper, 9-11; Intermediate and Higher Mathematics, 1st paper, 12-2; Lower Greek, 3-6. |

<sup>1</sup> When names are not entered, nor fees paid, on or before the stated dates, or a Pass obtained where the fee has been previously paid, a late-entry fee of ten shillings must be paid before the Candidate can be admitted to examination. This fee will not be received after Twelve o'clock of the last day but one preceding the Examination for which the Candidate desires to appear, without the express permission of the Dean of his Faculty and the subsequent sanction of the Senatus. A Candidate must enter his name and pay the fee, or, when the fee has been previously paid, obtain a Pass, for each periodical Examination at which he desires to appear. A Candidate is not held to be entered until his Schedule is lodged, the Fee paid, and a Pass to the Examination obtained.

## 1901.

- Sept. 30. Mon. Higher Latin, 2nd paper, 9-11 ; Intermediate and Higher Mathematics, 12-2.  
 Oct. 1. Tu. Higher Greek, 1st paper, 9-11 ; French, 1st paper, 12-1.30 ; Dynamics, 3-6.  
 „ 2. Wed. Higher Greek, 2nd paper, 9-11 ; French, 2nd paper, 12-2 ; German, 1st paper, 3-4.30.  
 „ 3. Thur. German, 2nd paper, 9-11 ; Italian, 12-1.30, 3-5.

## 1902.

- Mar. 1. Fri. Names to be given in, and Fees paid, *on or before* this date.  
 „ 28. Fri. English, 1st paper, 9-11 ; Higher Latin, 1st paper, 12-2 ; Lower Latin, 3-6.  
 „ 29. Sat. English, 2nd paper, 9-11 ; Intermediate and Higher Mathematics, 1st paper, 12-2 ; Lower Greek, 3-6.  
 „ 31. Mon. Higher Latin, 2nd paper, 9-11 ; Intermediate and Higher Mathematics, 2nd paper, 12-2.  
 April 1. Tu. Higher Greek, 1st paper, 9-11 ; French, 1st paper, 12-1.30 ; Dynamics, 3-6.  
 „ 2. Wed. Higher Greek, 2nd paper, 9-11 ; French, 2nd paper, 12-2 ; German, 1st paper, 3-4.30.  
 „ 3. Thur. German, 2nd paper, 9-11 ; Italian, 12-1.30, 3-5.

FIRST SCIENCE EXAMINATION.<sup>1</sup>

## 1901.

- Oct. 3. Thur. Names to be given in, Certificates shown, and Fees paid, *on or before* this date.  
 „ 10. Thur. Mathematics, 9-11, 11.30-1.30 ; Natural Philosophy, 2.30-4.30.  
 „ 11. Fri. Natural Philosophy, 9-11 ; Mathematics for Engineering, 11.30-1.30, 2.30-5.30.

## 1902.

- Mar. 4. Tu. Names to be given in, and Fees paid, *on or before* this date.  
 „ 21. Fri. Certificates to be examined from 10-3.  
 „ 24. Mon. Chemistry, 10-12 ; Laboratory Work (Public Health), 10-12 ; Physics (Public Health), 1-3. Practical Chemistry and Oral Examinations may begin.  
 „ 25. Tu. Botany, 10-12 ; Zoology, 1-3 ; Geology (Public Health), 1-3.  
 „ 26. Wed. Practical Work in Public Health Laboratory begins.

<sup>1</sup> See footnote, page 275.

1902.

Mar.	29.	Sat.	Mathematics, 12-2.
,,	31.	Mon.	Mathematics, 12-2; Drawing (Geometrical), 9-12.
April	4.	Fri.	Natural Philosophy, 9-11, 11.30-1.30.
July	4.	Fri.	Names to be given in, and Fees paid, <i>on or before</i> this date.
,,	16.	Wed.	Certificates to be examined from 10-3.
,,	18.	Fri.	Chemistry, 10-12; Geology (Public Health), 1-3; Laboratory Work (Public Health), 10-12; Physics (Public Health), 1-3. Practical Chemistry and Oral Examinations may begin.
,,	21.	Mon.	Practical Work in Public Health Laboratory begins.

FINAL SCIENCE EXAMINATION.<sup>1</sup>

1901.

Oct.	3.	Thur.	Names to be given in, Certificates shown, and Fees paid, <i>on or before</i> this date.
,,	11.	Fri.	Zoology, 9-12 (1st paper), 1-3 (2nd paper); Practical Examination at time to be arranged.
,,	12.	Sat.	Astronomy, 9-12 (1st paper), 1-3 (2nd paper).

1902.

Mar.	4.	Tu.	Names to be given in, and Fees paid, <i>on or before</i> this date.
,,	20.	Thur.	Economic Science (Agriculture), 5-7. Certificates to be examined.
,,	25.	Tu.	Botany, 9-12 (1st paper), 1-3 (2nd paper); Pract. Exam. at time to be arranged; Vet. Hygiene, 1-3.
,,	26.	Wed.	Medicine (Public Health), 10-12; Sanitary Law, 1-3; Vital Statistics, 4-6.
,,	27.	Thur.	Sanitation, 10-12, 1-4. Oral and Pract. Exam. at times to be arranged. Geology (Agric. and Engineering), 1-3.
,,	28.	Fri.	Physiology, 9-12 (1st paper), 1-3 (2nd paper); Practical Examination at time to be arranged. Agriculture, 9-12; Agricultural Chemistry, 1-3; Practical Examination in Agricultural Chemistry, at time to be arranged.
April	1.	Tu.	Mathematics, 9-12; Engineering, 9-11, 3-5.
,,	2.	Wed.	Mathematics, 9-12, 2-5; Engineering, 9-12; Engineering Field-Work (Agriculture), 3-5; Dynamics (Engineering), 2-5.

<sup>1</sup> See footnote, page 275.



1902.

- April 3. Thur. Pure Mathematics, 9-12; Natural Philosophy, 2-5; Engineering, 9-11; Engineering (Agriculture), 9-11; Experimental Physics (Agriculture), 3-5.
- „ 4. Fri. Natural Philosophy, 9-12, 2-5; Experimental Physics, 9-12; Agricultural Entomology, 9-11; Forestry, 11.30-1-30; Drawing (Engineering), 9-12, 2-5.
- July 4. Fri. Names to be given in, and Fees paid, *on or before* this date.
- „ 16. Wed. Certificates to be examined.
- „ 18. Fri. Chemistry, 9-12 (1st paper), 1-3 (2nd paper); Practical Examination at time to be arranged.
- „ 19. Sat. Geology, 9-12 (1st paper), 1-3 (2nd paper); Practical Examination at time to be arranged.
- „ 21. Mon. Human Anatomy (including Anthropology), 9-12 (1st paper), 1-3 (2nd paper); Practical Examination at time to be arranged.

DOCTOR OF SCIENCE.<sup>1</sup>

D.Sc. Candidates are required to lodge their Theses and proof of their eligibility with the *Dean of the Faculty of Science* at the Matriculation Office, and to pay the Fees on or before 1st December.

Candidates for D.Sc. in Public Health are required to intimate the subjects in which they desire to be examined to the Dean before 20th January. The examination will take place about the end of March.

**Degrees in Science.**

## DOCTORS OF SCIENCE.

The names of the Doctors of Science previously to 1889, will be found in the Historical Appendix to List of Graduates published in 1889, pp. 132-134. The following are the names of the Doctors from 1889 to 1901, both years included :—

## IN PURE SCIENCE.

- |                                 |                                |
|---------------------------------|--------------------------------|
| 1889. Thomas Rhymer Marshall.   | 1891. Thomas Smith Murray.     |
| 1890. Alex. Crichton Mitchell.  | 1892. Jacques François Marais, |
| „ Hugh Marshall.                | B.A.                           |
| 1891. William Cossar Mackenzie. | 1893. John Shields.            |

<sup>1</sup> See footnote, page 275.

1894. Malcolm Laurie, B.Sc.  
 „ Charles Hunter Stewart,  
 M.B., C.M., B.Sc.

1895. Arthur Pillans Laurie, B.Sc.

1896. John Carruthers Beattie,  
 B.Sc.  
 „ John Charles Mitchell,  
 B.Sc.

1897. Frederick Beddow, B.Sc.  
 „ Alexander Morgan, M.A.,  
 B.Sc.

„ Gregg Wilson, M.A.,  
 B.Sc.

1898. Robert Stewart Mac-  
 Dougall, M.A., B.Sc.

„ Joseph Prokop Pražák,  
 Ph.D., D.Jur.

1899. John Henderson, B.Sc.

1899. Thomas Cleghorn Baillie,  
 M.A., B.Sc.

„ George Coull, B.Sc.

„ John Archibald Purves,  
 B.Sc.

1900. John Smith Flett, M.A.,  
 B.Sc. (Edin.).

„ James Rymer Paterson,  
 B.Sc. (Edin.).

1901. James Young Simpson,  
 M.A., B.Sc. (Scotland),

„ Alfred Hay, B.Sc.

„ John Edwin Mackenzie,  
 B.Sc.

„ William White Taylor,  
 M.A., B.Sc.

„ Samuel Walker, M.A.,  
 B.Sc.

#### IN ENGINEERING.

1898. John Thomas Nicolson.  
 28th July 1900.

#### IN PUBLIC HEALTH.

1890. James Anderson, M.D.

„ James Andrew Blair, M.B.

„ William John Brock, M.B.

„ John Stevenson, M.B.

1892. Charles Henry Bedford,  
 M.D.

„ Robt. Wm. Dickinson Mac-  
 Martin Cameron, M.D.

„ Alex. C. Houston, M.B.,  
 C.M.

„ William George Aitchison  
 Robertson, M.D.

1893. Edward Henry Ezard, M.D.

„ John Howard-Jones, M.B.

„ John Fred. Joseph Sykes,  
 M.B.

1893. James Buchanan Young,  
 M.B.

1894. Henry Halcro Johnston,  
 M.D.

„ John Macmillan, M.A.,  
 M.B., C.M.

„ Charles Templeman, M.D.

1898. Walter Holland Ogilvie,  
 M.B., C.M., B.Sc.

„ Charles Hubert Bond,  
 M.D., B.Sc.

„ Charles Killick Millard,  
 M.D., B.Sc.

1899. John Penny, M.B., C.M.,  
 B.Sc.

1900. Arthur Douglas Webster,  
 M.D., B.Sc.

## Degrees Conferred in 1900-1901.

### THE DEGREE OF DOCTOR OF SCIENCE.

26th January 1901.

James Young Simpson, M.A., B.Sc. *Thesis*—"Observations on some  
 Outstanding Features of Protozoan Life."

280 *Degrees in Science—D.Sc. & B.Sc. conferred 1900-1901.*

12th April 1901.

Alfred Hay, B.Sc. (Edin.). *Thesis*—"Analytical and Experimental Investigations of Impulsive Current-Rushes in Inductive Circuits, with special reference to the Behaviour of Transformers at the instant of switching on."

John Edwin Mackenzie, B.Sc. (Edin.), Ph.D. (Strassburg). *Thesis*—"The Action of Sodium Methoxide and its Homologues on Benzophenone Chloride and Benzal Chloride."

William White Taylor, M.A., B.Sc. (Edin.). *Thesis*—"The Ionisation of Salts of Polybasic Acids."

Samuel Walker, M.A., B.Sc. (Edin.). *Thesis*—"The action of Nitric Acid on Copper and Zinc, and on Alloys and Mixtures of these Metals."

IN THE DEPARTMENT OF PUBLIC HEALTH.

28th July 1900.

Arthur Douglas Webster, M.D., B.Sc. *Thesis*—"Observations extending over three years, on the Amount of Carbonic Acid in the Ground Air, in relation to the Earth Temperature at a depth of three feet."

12th April 1901.

Charles James Lewis, M.D., B.Sc. (Edin.). *Thesis*—"Bacteriological Examination of the Renal Secretion in certain Zymotic Diseases, with subsidiary Differential Experiments."

IN THE DEPARTMENT OF ENGINEERING.

Ernest George Coker, B.Sc. (Edin.). *Thesis*—"Apparatus for measuring Strain and applying Stress, with an account of some Experiments on the Behaviour of Iron and Steel under Stress." (*In absentia*.)

Thomas Summers, B.Sc. (Edin.). *Thesis*—"The Fuleli (Sind) Canal Escape."

THE DEGREE OF BACHELOR OF SCIENCE.

28th July 1900.

Alexander Bruce.

\* Charles Macfie Campbell, M.A.

† John Kenneth Harrold Inglis, M.A., B.Sc. (New Zealand).  
Alexander Lauder.

John Miller Nisbet, M.A.

20th October 1900

Charles Anderson (M.A.)

---

\* Passed with Special Distinction in Chemistry.

† Passed with Special Distinction in Anatomy and Anthropology.

12th April 1901.

Peter Ramsay Chalmers  
John Downie Falconer, M.A.  
David Paton Grubb, B.Sc. (Engin.).  
Grace Helen Jacob.  
Alexander Robert Normand, M.A.  
\*George Aimer Russell, M.A.  
†Roderick M'Leod Shearer, M.A.  
Thomas William Stewart, M.A.  
Forsyth James Wilson.  
‡Andrew Young, M.A.

IN ENGINEERING.

28th July 1900.

John Somerville Johnston Geikie.

12th April 1901.

Alfred Henry Armstrong.  
Robert Guthrie Russel.

IN PUBLIC HEALTH.

28th July 1900.

George Dick, M.B., Ch.B.  
Owen St John Moses, M.D.  
Patrick Murison, M.B., C.M.

20th October.

Hugh Bennett (Surg. Capt. I.M.S., M.D. Edin.).

12th April 1901.

Angus John Grant, M.D.  
Joseph Norris Marston, M.D. (*in absentia*).  
James Adam Shoolbread, M.B., C.M.

## Fellowships, Scholarships, Bursaries, Prizes, &c., in Science.

### I.—FELLOWSHIPS.

*See note under Scholarships, page 176.*

#### I.—THE FALCONER MEMORIAL FELLOWSHIP.

This Fellowship was founded in 1869 by the Subscribers to the Fund for a Memorial to Hugh Falconer, M.D. (for many years Superin-

\* Passed with Special Distinction in Astronomy.

† Passed with Special Distinction in Mathematics and Natural Philosophy.

‡ Passed with Special Distinction in Geology and Mineralogy.

tendent of the H. E. I. Company's Botanic Gardens at Suharunpoor and Calcutta), and the Association for the better Endowment of the University, for the encouragement of the Study of Palæontology and Geology. It is of the annual value of £112, and is tenable for two years, but if the Senatus see fit, it may be held for three years, and with consent of the University Court, for four years. It is awarded after competitive examination in Natural History as applied to Palæontology and Geology, and is open to Graduates in Science or Medicine of this University of not more than three years' standing at the time of the competition. It cannot be held along with any other Fellowship, Scholarship, or Bursary in any Scottish University. The Deed of Foundation will be found at p. 270 of the CALENDAR for 1870-71. The next appointment may be made in July 1903.

1899. *Cecil Burleigh Crampton, M.B., C.M.*

## II.—GEORGE HERIOT'S RESEARCH FELLOWSHIIPS.

For particulars apply to DAVID LEWIS, Treasurer, George Heriot's Trust, 20 York Place, Edinburgh; and see under Faculty of Arts.

## II.—SCHOLARSHIPS.

### I.—BAXTER PHYSICAL SCIENCE SCHOLARSHIP.

This Scholarship was founded by Sir David Baxter, Bart., of Kilmaron, in 1865, and is of the annual value of £76, 3s., tenable for two years. It is awarded, on the result of the Final Examination for the Degree of Bachelor of Science, to the student who is most distinguished in two or more of the Physical Science subjects—viz., Mathematics, Natural Philosophy, Astronomy, Chemistry, either in the year preceding a vacancy, or in the year in which a vacancy occurs. The holder is required to satisfy the Senatus Academicus that he has been pursuing his studies in Science during the first year of his tenure in such a manner as the Senatus may fix. It cannot be held with any other Scholarship, Fellowship, or Bursary, or with any situation yielding an annual income of £100. Next vacancy in 1902.

1900. *David Drysdale, M.A., B.Sc.*

### II.—BAXTER NATURAL SCIENCE SCHOLARSHIP.

This Scholarship was founded by Sir David Baxter, Bart., of Kilmaron, in 1865, and is of the annual value of £76, 3s., tenable for two years. It is awarded, on the result of the Final Examination for the Degree of Bachelor of Science, to the Student who is most distinguished in two or more of the Natural Science subjects—viz., Human Anatomy, including Anthropology; Physiology, including Histology; Geology, including Mineralogy; Zoology, including Comparative Anatomy; Botany, including Vegetable Histology, either in the year preceding a vacancy, or in the year in which a vacancy occurs. The holder is



required to satisfy the Senatus Academicus that he has been pursuing his studies in Science during the first year of his tenure in such manner as the Senatus may fix. It cannot be held with any other Scholarship, Fellowship, or Bursary, or with any situation yielding an annual income of £100. Next vacancy in 1902.

1900. *Charles Macfie Campbell, M.A., B.Sc.*

### III.-VIII.—VANS DUNLOP SCHOLARSHIPS.

These Scholarships are each of the annual value of £100, and are tenable for three years. The following are the General Regulations:—

Competitors must have regularly attended at least one full Course or two Half-Courses in the University of Edinburgh during each Academic year in which they claim to have been Matriculated Students, and no Candidate is eligible who has discontinued attendance at the University of Edinburgh for more than one year. The years of Academic study count from the first year in which a Candidate has attended one of the classes qualifying for the degree of B.Sc.

Each Scholarship is tenable for three years, on condition that the scholar submits annually to the University evidence that he is prosecuting his studies or his professional work in a manner satisfactory to the Senatus. The evidence may consist of—(1) A certificate of attendance on lectures or laboratories approved by the Senatus; or (2) a certificate of having acted as an assistant to a Professor in this or some other University; or (3) a written report of his work done during the year, together with a Thesis composed by himself in connection with some part of that work.

Not more than one of these Scholarships can be held by the same person. Scholars cannot hold, along with their Scholarships, any other Fellowship, Scholarship, or Bursary in the University of Edinburgh.

Candidates must, on entering for the Examinations, produce evidence that they have fulfilled the conditions of eligibility.

Candidates, if not already matriculated, are required to pay the Matriculation Fee for the year in which the competition takes place.

The names of Candidates highly distinguished in the examinations may be published.

### III.—MATHEMATICS.<sup>1</sup>

The next Competition will take place in April 1904.

### IV.—NATURAL PHILOSOPHY.<sup>1</sup>

The next Competition will take place in April 1904.

### V.—AGRICULTURE AND RURAL ECONOMY.

This Scholarship is open to all Matriculated Students who have regularly attended classes in this University for not less than two and not

<sup>1</sup> For particulars, see "Scholarships" in Faculty of Arts.

more than six years, and who have attended the Class of Agriculture and Rural Economy within one year of the date of Competition. The subjects of Examination are Agriculture, Chemistry, Botany, and Veterinary Science. The next Competition will take place in March 1904.

The Examiners are the Professor of Agriculture and an Examiner nominated by the Senatus.

1901. *William Bruce, B.Sc.*

#### VI.—CHEMISTRY.

(1.) The subjects of Examination are:—(a) Inorganic and Organic Chemistry, and the connection between the Chemical and Physical character of Substances. (b) Qualitative and Simple Quantitative Analysis of Inorganic Substances, and the Preparation of Pure Chemical Substances. (2) The Examination in subjects (a) is similar, and will be held at the same time as the Second B.Sc. Examination. The Examination in subjects (b) is conducted practically in the Laboratory. (3) The Competition is open to all Students of the University, from the second to the sixth year (inclusive) of their attendance, and will take place in July 1903.

1900. *J. K. H. Inglis, M.A., B.Sc.*

#### VII.—NATURAL HISTORY, INCLUDING GEOLOGY AND BOTANY.

(1.) The subjects Natural History, Geology, and Botany are coequal in the Examination, and the Examination in each of the three subjects is similar to that for the Second B.Sc. in Pure Science, and consists of two parts—a Written Examination extending over not less than three hours, and a Practical Examination with specimens.

(2.) The next Examination will be held in April 1904, at the same time as the Second B.Sc. Examination.

(3.) The Competition is open to all Students of the University, from the second to the sixth year (inclusive) of their attendance.

1901. *John D. Falconer, M.A., B.Sc.*

#### VIII.—ENGINEERING AND MECHANICAL AND USEFUL ARTS.

The Examination is similar to that for the Second B.Sc. in Engineering, with the addition of questions on prescribed books treating of Engineering and Mechanical and Useful Arts.

The Competition is open to all Matriculated Students who have been in regular attendance on the Class of Engineering for at least two Winter Sessions, and who have not been Students of the University for more than four years. The next Competition will take place in April 1903.

The Examiners are the Professors of Engineering and Natural Philosophy.

1900. *David P. Grubb, B.Sc.* } equal.  
           *John M. Newton, B.Sc.* }

## IX.—STEVEN SCHOLARSHIP IN AGRICULTURE.

This Scholarship was founded in 1882 by the Misses Steven of Bella-houston in memory of their brother Moses Steven, Esq. It is of the value of £70, and is awarded annually, in connection with the Class of Agriculture, the subjects of examination being Agriculture and General and Agricultural Chemistry.

The Scholar is required to visit the annual exhibitions of the four leading agricultural societies, or such as the Professor of Agriculture shall appoint, and to report on his visit or visits to the satisfaction of the Professor of Agriculture. The Exhibitions which the Scholar is required to visit are:—

The Royal Agricultural Society of England.

The Bath and West of England Agricultural Society.

The Highland and Agricultural Society of Scotland.

Royal Agricultural Society of Ireland.

See Deed of Foundation at p. 397 of CALENDAR for 1882-83.

1901. *Fred. Smith* and *D. S. Rabagliati*—equal.

## X., XI.—HOPE PRIZE SCHOLARSHIPS.

Two Hope Prize Scholarships have been instituted (with funds formerly of the Hope Chemistry Prize founded by the late Professor Thomas C. Hope) in connection with the Chemical Laboratory of the University, each of the value of about £30 per annum, tenable for one year, and awarded annually at the end of the Winter Session. Each Scholarship is awarded to the student whom the Professor of Chemistry thinks most deserving of those who have worked during that Winter Session in the Chemical Laboratory of the University. The scholars must work during the Summer and Winter Sessions succeeding their appointment in the Chemical Laboratory of the University, and must assist the Professor of Chemistry in such manner as he thinks fit in each case, and the scholars are not required to pay fees for the Laboratory. In case of resignation of a scholar, or of a scholar failing to fulfil the conditions, the Professor of Chemistry may, if he thinks proper recommend a student working in the Chemical Laboratory for the remainder of the Scholarship so become vacant, the new scholar so appointed to perform the duties and receive the payments during the remainder of the time for which his predecessor was appointed. Scholars may, in case of great distinction, be appointed for a second year.

1901. *Robert Howden* and *Clerk Ranken*.

XII.—NEIL ARNOTT SCHOLARSHIP IN EXPERIMENTAL PHYSICS.<sup>1</sup>

Is awarded annually in April.

<sup>1</sup> For particulars, see "Scholarships" in Faculty of Arts.

## XIII., XIV.—THE MACKAY SMITH SCHOLARSHIPS.

These Scholarships, one in Natural Philosophy and one in Chemistry, each of the annual value of £25, tenable for two years, and to be held under such regulations and conditions as the Senatus may from time to time direct. The Scholarship in Natural Philosophy is open for competition to Students who have attended the Class of Natural Philosophy, and the Scholarship in Chemistry to Students who have attended the Class of Chemistry, both in this University. The successful Candidate for the Scholarship in Natural Philosophy is bound to attend the Class of Natural Philosophy, or to prosecute the study thereof, in the University during at least one year of his tenure of the Scholarship, in such way as the Senatus may direct or approve; and the Scholarship in Chemistry is held under similar conditions as regards attendance on the Class of Chemistry, and the prosecution of the study thereof. The next Competition—Natural Philosophy—will take place at the end of Winter Session 1902, and in Chemistry in July 1902.

1900. *J. Falconer, M.A. (Chem.).* | *William Gentle (Nat. Phil.).*

XV.—ROYAL COMMISSION FOR EXHIBITION OF 1851  
PHYSICAL SCIENCE SCHOLARSHIP.

The Commissioners for the Exhibition of 1851 give this University the power of nominating a Student to a Scholarship of £150 a-year, tenable for two years, and which may be extended to three years under the following conditions, viz. (a) That he is a British subject; (b) That he has been a *bona fide* student of Science in this University for three years; (c) That he has been for a full year previous to his appointment, and at the date of his appointment is, a student of the University, or has been a student of the University for a full year ending within twelve months prior to the date of his appointment, and since ceasing to be such student has been engaged solely in scientific study. The Scholarship is limited to those branches of Science (such as Physics, Mechanics, and Chemistry) the extension of which is specially important for the national industries, and may be tenable in any University or other Institution to be approved by the Commissioners. Applications must be made annually not later than the 1st of March. See Regulations, p. 544 of CALENDAR for 1891-92.

XVI., XVII.—THE ARTHUR TREVELYAN SCHOLARSHIPS  
IN ENGINEERING.

Two Arthur Trevelyan Scholarships in Engineering, of about £15, 12s. per annum, for proficiency in Engineering and the Mechanical and useful Arts, tenable in this University for two years. Candidates must not be more than nineteen years of age, must have passed the preliminary examination or its equivalent, and must not have attended more than one Winter and one Summer Course in Engineering and field work

respectively, either in this University or elsewhere. The subjects of examination are (*a*) Mathematics, as far as the subjects required for the first B.Sc. examination in Engineering; (*b*) Physics to the same extent; (*c*) Engineering (the subjects of the previous Winter Session and field work); (*d*) geometrical drawing and elementary graphics. See Excerpt from Deed, page 538 of CALENDAR for 1892-93. One Scholarship is awarded annually in March.

1901. *A. F. M. Clark.*

#### XVIII., XIX.—MISSES BAXTER OF BALGAVIES SCHOLARSHIPS AND BURSARIES.

Under this Endowment there are two Scholarships, of the annual value of £40, and two Bursaries, of the annual value of £30. They are in the gift of the Directors of the High School of Dundee, and are open for competition to all pupils of that school who shall have finished their course at the time, or within one year previously. The examination is held in Dundee by examiners appointed by the Directors, and the subjects are Geometry, Algebra, Trigonometry, and Mechanical Drawing. The Scholarships are tenable for one year certain, and for a second if a favourable certificate is sent to the Directors by the Senatus Academicus, and the Bursaries for two years. The patrons may extend the tenure of these Scholarships for a further period of one year, provided the holder shall have previously passed the First Examination for the Degree of Bachelor of Science in the Department of Engineering in this University. The Classes to be attended during the first two years are Mathematics, Natural Philosophy (two courses), Engineering (two courses), and Chemistry, and may (by resolution of the Senatus), be attended in any order most convenient to the scholar, provided he intimate his intentions to the Dean of the Faculty of Science beforehand. In the event of a third year's tenure, the Scholar may attend any two classes selected by himself and approved by the Senatus.

These Scholarships are not to be held with any other Scholarship, Fellowship, or appointment yielding £50 per annum. See Deeds of Foundation, at page 255 of the CALENDAR for 1869-70, at p. 372 of CALENDAR for 1878-79, and at p. 377 of the CALENDAR for 1881-1882.

#### XX.—GRAY SCHOLARSHIP FOR RESEARCH.<sup>1</sup>

#### XXI.—THE WILLIAM DICKSON TRAVELLING FUND.<sup>1</sup>

#### XXII.—EARL OF MORAY ENDOWMENT FOR THE PROMOTION OF ORIGINAL RESEARCH.<sup>1</sup>

<sup>1</sup> For particulars, see under Faculty of Arts.



### XXIII.—THE SWINEY LECTURESHIP ON GEOLOGY.

This Lectureship is in the patronage of the Trustees of the British Museum, and is of the annual value of £144. The Trustees may appoint any Graduate in any Faculty of the University who has obtained his degree after examination. The office is tenable for five years, at the expiration of which period the Lecturer is ineligible for the next election. The number of lectures is not to be less than twelve in each year, nor more than three in the same week. The course is required to be annually delivered between the first of November and the end of July following, at such public places in the United Kingdom as the Trustees shall approve. The public are admitted without fee. The Lecturer is required at the termination of each course to deposit a copy, or full extract of such course of lectures, with the Principal Librarian of the British Museum, to whom application may be made for further particulars.

Of the foregoing Fellowships, Scholarships, Bursaries, and Prizes, the following are open during 1900-1901.<sup>1</sup>

### FELLOWSHIPS.<sup>1</sup>

- 1-5. *George Heriot Fellowships for Research*, No. IV., page 190.

### SCHOLARSHIPS.<sup>1</sup>

1. *Royal Commission for Exhibition of 1851 Physical Science Scholarship*, No. XV., page 286.
2. *Misses Baxter of Balgavies Scholarship*, of the annual value of £40, No. XVIII., page 287.
3. *The Mackay Smith Scholarship in Natural Philosophy*, No. XIII., page 286. The Examination will take place at the same time as the Examination in Natural Philosophy for the ordinary Degree of M.A. (4th April 1902, from 9-11 and 11.30-1.30). Names to be entered at the Matriculation Office on or before 15th March.
4. *The Mackay Smith Scholarship in Chemistry*, No. XIV., page 286. The Examination will begin on 18th July 1902, at 9 o'clock A.M. Names of Candidates to be entered at the Matriculation Office on or before 1st July.
- 5, 6. *Two Hope Prize Scholarships*, Nos. X. and XI., page 285.
7. *Steven Scholarship in Agriculture*, No. IX., page 285. The com-

<sup>1</sup> For further information, and for information regarding other Fellowships, Scholarships, Bursaries, and Prizes, see pp. 281-283, where full information regarding the conditions and values, &c., are given. The values of the Fellowships, Scholarships, Bursaries, and Prizes are subject to variation consequent on the rise and fall of the rate of interest, &c.



petition takes place in March. Candidates to enter names *on or before* 15th March.

8. *Neil Arnott Scholarship for Experimental Physics*, No. XII., page 285.

9. *One Arthur Trevelyan Scholarship in Engineering*, No. XVI., page 286. Names of Candidates to be entered *on or before* 15th March.

### FUNDS FOR RESEARCH.<sup>1</sup>

1. *The William Dickson Travelling Fund*, No. XXI., page 287. Applications, on special forms to be obtained in the Matriculation Office, must be lodged with the Secretary of Senatus *on or before* 15th March annually.<sup>1</sup>

2. *The Earl of Moray Endowment for the Promotion of Original Research*, No. XXII., page 287. Applications for participation in the Fund should be addressed to the Secretary of Senatus.<sup>1</sup>

### BURSARIES.<sup>2</sup>

1. *One Sibbald Bursary*.<sup>1</sup>

2. *Heriot Bursaries*.<sup>1</sup>

3. *The Donald Fraser Bursary*.<sup>1</sup>

4. *Renton Bursary*.<sup>1</sup>

5-8. *Four Buchanan Bursaries* may be held in the Faculty of Science.<sup>1</sup>  
*Town Council Bursaries*.—Apply to the City Clerk, Council Chambers, Edinburgh.

*University Bursaries cannot be held along with any other Bursary.*

### PRIZES.<sup>2</sup>

1, 2. *Two Newton Bursaries or Prizes*.<sup>1</sup>

3. *The Kelland Memorial Prize*.<sup>1</sup>

4. *The Lord Rector's Prize*.<sup>1</sup>

5, 6, 7. *The Gray Prize Essays*.<sup>1</sup>

The attention of all Bursars in the Faculty of Science is particularly called to the following regulation:—

Bursars, &c., in the Faculty of Science (to whose Bursaries special conditions are not attached) must annually attend at least two of the Classes necessary for the Degree of Bachelor of Science, and must present themselves at the Examinations necessary for that Degree.

Each Fellow, Scholar, Bursar, or Prizeman, when he applies to the Factor for a payment, must produce a Certificate, signed by the Dean or the Professor to whose department the Foundation is attached

<sup>1</sup> For particulars, see under Faculty of Arts.

<sup>2</sup> See footnote, page 288.

attesting his regular attendance on the proper Classes, &c., or otherwise that he has fulfilled the conditions attached to the Foundation.

Certificates, in terms of this regulation, will be given to Bursars, by the *Dean of the Faculty of Science*, on 15th November; and at the end of the Session. In applying to the Dean for the Certificate in November, Bursars must present their Class Cards for the Session; and at the end of the Session they must present Certificates from the Professors that they have attended with regularity and made progress in their studies. Payments are made by the University Factor, Mr Henry Cook, W.S., 61 North Castle Street, Edinburgh, on and after 15th November for the Martinmas payments, and on and after 19th May for the Whitsunday payments,—between 10 and 3 o'clock.

N.B.—*Bursars, Scholars, and Fellows who desire to resign should at once announce this to the Factor. They must apply to the Factor for the instalments due to them within three months after they have become payable, otherwise they will be regarded as having resigned.*

JAMES GEIKIE, D.C.L., LL.D., F.R.S., &c.,  
*Dean of the Faculty of Science.*

# Programme of Classes.

## FACULTY OF DIVINITY.

1901-1902.

Dean—Professor PATRICK, D.D.

*The Classes will be opened as follows, and will close on 14th March 1902.*

Classes.	Days of Opening, and Hours of Lectures.	Professors.	Class Fees. <sup>1</sup>
Divinity .....	22 Oct., 12 o'cl.	Prof. Flint.....	£3 3
Ecclesiastical History.	22 Oct., 11 „	Prof. Taylor.....	3 3
Biblical Criticism.....	22 Oct., 10 „	Prof. Patrick ...	3 3
Hebrew—Junior Cl....	22 Oct., 1 „	} Prof. Kennedy.	{ 3 3
Senior Cl....	22 Oct., 2 „		{ 3 3
Arabic ( <i>Mond., Wed.,     &amp; Frid.</i> ).....	23 Oct., 3 „		{ 3 3
Syriac ( <i>Tues. &amp;     Thurs.</i> ).....	22 Oct., 3 „	}	{ 2 2

THE SUMMER PREPARATORY CLASSES IN ELEMENTARY HEBREW AND ELEMENTARY ARABIC, conducted by the Class-Assistant under the superintendence of the Professor, open on 1st May, at 10 A.M. and 11 A.M. Fee for Hebrew, £1, 11s. 6d. ; and for Arabic, £2, 2s.

GIFFORD LECTURESHIP, for “promoting, advancing, teaching, and diffusing the study of Natural Theology in the widest sense of that term.”  
*Lecturer*—Professor WILLIAM JAMES of Harvard University, U.S.A.

The arrangements for the Course will be announced before the beginning of next Session.

MATRICULATION. See pages 27-29.

## CURRICULUM FOR THE MINISTRY IN THE CHURCH OF SCOTLAND.

The Laws of the Church of Scotland require that every Theological Student, who desires to qualify himself for the Ministry, should attend the Class of *Divinity*, either during *three full and*

<sup>1</sup> For Second and Third Attendances in Divinity, no reduction. Subsequent attendances free. For Second Attendances on Hebrew, Ecclesiastical History, and Biblical Criticism, no reduction. Subsequent attendances free. Fee in case of Licentiates of Foreign and Colonial Churches, £2, 2s.

*regular Sessions*, or during *two regular and three partial Sessions*;—and also that he should regularly attend during two Sessions each of the Classes of *Hebrew, Ecclesiastical History, and Biblical Criticism*.

#### *Entrance Examinations.*

(1) Students, before enrolment *for the first year* of their curriculum with a view to the Ministry in the Church of Scotland, must produce to the Professor of Divinity Certificates of their having satisfactorily undergone an Examination in the subjects embraced in the *Curriculum of Arts*, and also in the Elements of Hebrew Grammar. By Act IX. of General Assembly 1872, it is ordained that this Examination shall be conducted at each of the four Scottish Universities, shortly before the commencement of every Session, by four Examining Committees, consisting of members elected by the adjoining Synods, with Conveners nominated by the General Assembly. *The Convener of the Committee for the University of Edinburgh is the Rev. John Alison, D.D., Minister of Newington.* The time of the Committee's meeting and the prescribed subjects of Examination will be timeously advertised in the *Mission Record* of the Church of Scotland.

(2) Students, before enrolment at the beginning of *every Session after the first* of their Course in Divinity, must produce certificates of their having satisfactorily undergone the Examinations prescribed by their respective Presbyteries. For subjects of Examination prescribed by the *Presbytery of Edinburgh*, see *Appendix to Calendar*.

#### *Discourses.*

Every Student of Divinity is required during his curriculum to deliver with approbation *six* discourses upon subjects prescribed by the Professor of Divinity, viz., a Homily, a Latin Thesis, a Lecture, a popular Sermon, a Hebrew Exercise on a passage of the Old Testament, and an Exercise with additions on a passage of the Greek New Testament.

The following Regulations have been made by the Faculty of Theology in regard to the delivery of these Discourses. (1) Students of the *first year* shall give in their *Homily* to the

Professor of Divinity not later than 1st February ; (2) Students of the *second* year shall give in their *Latin Thesis* not later than the 16th December, and shall be prepared to deliver their *Lecture* not later than the 10th January ; (3) Students of the *third* year shall give in their *Hebrew Exercise* and their *Greek Exercise* with additions, not later than the 16th December, and shall be prepared to deliver their *Popular Sermon* not later than the 2nd of February.

*Attendance at Foreign Universities.*

The General Assembly of 1868, with the consent of a majority of Presbyteries, enacted and ordained:—(1) That all Candidates for the ministry shall attend during at least *two sessions* the Theological Classes at one or more of the Universities of Scotland, and shall deliver, with approbation, the Six Trial Discourses required by the Acts of the General Assembly ; and (2) That any Student who wishes to prosecute the remainder of his Theological Curriculum at any Protestant University or Universities not within the bounds of this Church, shall, before repairing thither, undergo satisfactory examination by the Presbytery with which he is connected, and shall, moreover, satisfy the same Presbytery in regard both to the Classes which he proposes to attend, and to the proficiency he has acquired in the language used in the Foreign University in which he intends to study.

## Courses in the Faculty of Divinity.

### I. DIVINITY.

PROFESSOR FLINT.

The course of study in this class extends over three Sessions. The Subjects of the Lectures during 1901-1902 will be:—1. Theological Introduction, Encyclopædia, and Methodology. 2. The Philosophy of Religion. 3. Agnosticism, Theism, and Christian Apologetics. 4. Subjective Soteriology. 5. Eschatology.

Lectures will be delivered on Mondays, Tuesdays, Wednes-

days, and Thursdays at 12 o'clock. Fridays will be devoted partly to the hearing of Discourses and Exercises, and partly to Lectures.

The work of the class includes two written examinations and an essay.

## II. HEBREW AND SEMITIC LANGUAGES.

PROFESSOR KENNEDY.

A.—HEBREW.

*Junior Class—1 to 2.*

This class is conducted in two divisions, an upper and a lower. The latter is intended for students having no previous acquaintance with Hebrew, the former for those who have advanced as far as § 30 of the text-book. The Lower Junior will meet for the first time on the day appointed for the opening of the Arts classes, and thereafter on five days a week with the Professor or the Assistant. Text-books: Davidson's *Introductory Hebrew Grammar*, and the book of Genesis in Hebrew.

The Upper Junior will meet for the first time on the day appointed for the opening of the Divinity Classes, and thereafter on three days a week with the Professor or the Class-Assistant. On these days the class will continue the study of the Grammar, including parts of the Syntax (Davidson's *Hebrew Syntax*), and read easy prose passages from the Old Testament. On two days a week the two divisions will meet together for the revision of the Grammar, and for practice in translation into Hebrew.

The students' progress is regularly tested by oral and written examinations throughout the Session.

*For Preparatory Class of Elementary Hebrew (see page 291).*

*Senior Class—2 to 3.*

Study of Davidson's *Hebrew Syntax*. Hebrew Prose Composition. Reading of unpointed texts (Baer's *Pentateuch*).

Reading and Exposition of portions of the Historical, Poetical, and Prophetical Books of the Old Testament. For Session



1901-1902, Deuteronomy i.-xviii. ; Isaiah i.-xii. ; Psalms, Books iii.-iv.

A Course of Lectures, extending over two Sessions, on Old Testament Introduction (including History of the Canon, Text and Versions).

Oral and Written Examinations.

The Senior Hebrew Class will be the Graduating Class in Hebrew for the Ordinary Degree of Master of Arts ; and any student who desires to attend this Class with a view to Graduation in Arts must previously pass an examination, in accordance with Sect. IV. sub-sect. 3 of the Regulations.

The examination will include plain passages for translation from and into Hebrew, and grammatical questions.

Those who propose, in a subsequent Session, to take up Hebrew as one of their Graduation Subjects, will have an opportunity of attending the Junior Class in that language during the Session 1901-1902.

#### B.—ARABIC—3 to 4.

The course of instruction in Arabic extends over one Summer and two Winter Sessions.

(1) A Preparatory Class for elementary Arabic is conducted during the Summer Session by the Class-Assistant, under the superintendence of the Professor. *Intending students of Arabic are strongly advised to take this Class.* Text-books : Socin's *Arabic Grammar* (New Edition, 1895) and Jacob's *Bible Chrestomathy*. The fee is £2, 2s.

(2) A Junior Class in continuation of the above, meeting three days a week in *alternate* sessions (next in 1902-1903). Text-books : Socin's *Grammar* and Bruennow's *Chrestomathy of Arabic Prose Pieces* (1895). Elementary Arabic Composition. The fee is £3, 3s.

(3) A Senior Class, meeting ordinarily three days a week in *alternate* sessions (next in 1901-1902), for more advanced reading in prose and poetry, and for the study of Arabic syntax and composition. Text-books (besides those already mentioned) : The Koran (Fluegel's edition), Nallino's *Chrestomathia Coranica*

Noeldeke and Mueller's *Delectus Veterum Carminum Arabicorum* (1890), Wright's *Arabic Grammar* (3rd edit., 1896). The fee is £3, 3s.

This course has been sanctioned by the University Court as a half-course qualifying for graduation in Arts, and the class will be held in two successive sessions, if required, to meet the needs of intending graduates (so in 1900-1, 1901-2). For text-books see under *Graduation in Arts*.

### C.—SYRIAC—3 to 4.

The course of instruction in Syriac extends over two Winter Sessions.

(1) A Junior Class, meeting on two days a week in *alternate* sessions (next in 1902-1903), for the study of the grammar and the reading of portions of the Syriac gospels. Text-books: Nestle's *Syriac Grammar* (1889), Syriac New Testament

(2) A Senior Class, meeting on two days a week in *alternate* sessions (next in 1901-1902), for the study of syntax and composition and for more advanced reading in prose and poetry, such as the extracts from Bar-Hebræus and Ephrem Syrus in Roediger's *Chrestomathy* (3rd edit.) and the *Vitæ Prophetarum* in Nestle's *Grammar*.

The above order may be modified to suit intending students. The fee for each of these classes is £2, 2s.

## III. ECCLESIASTICAL HISTORY.

PROFESSOR TAYLOR.

1. *Lectures*—Mondays and Tuesdays.—On The Beginnings of Christianity.

2. *Lectures*—Wednesdays and Thursdays.—On the History of the Scottish Church from 1572.

3. *Text-book*—Fridays.—Kurtz's "History of the Christian Church." First Division<sup>2</sup>; First Section.

The work of the class includes three written examinations.

For the Regulations of the Vans Dunlop Scholarship in "History"—value about £100 annually for three years,—see

under "SCHOLARSHIPS IN ARTS" and "SCHOLARSHIPS IN DIVINITY."

#### IV. BIBLICAL CRITICISM AND BIBLICAL ANTIQUITIES.

PROFESSOR PATRICK.

It is intended to occupy next Session, with (1) Introduction to the Catholic Epistles and the Gospels. (2) Exegetical and Critical Lectures on the *New Testament*. (3) Reading of the New Testament in Greek. (4) Lectures on New Testament Times.

There will be written and oral examinations, in which all regular students are required to take part; and subjects of occasional voluntary essays may be suggested.

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#### LECTURESHIPS.

##### I.—GIFFORD LECTURES ON NATURAL THEOLOGY.

*Lecturer*—Professor WILLIAM JAMES of Harvard University.

These Lectures were endowed by the late Adam Gifford, Senator of the College of Justice, "for promoting, advancing, teaching, and diffusing the study of Natural Theology in the widest sense of that term."

According to the Trust Deed, "the lecturers appointed shall be subjected to no test of any kind, and shall not be required to take any oath, or to emit or subscribe any declaration of belief, or to make any promise of any kind; they may be of any denomination whatever, or of no denomination at all; they may be of any religion or way of thinking, or, as is sometimes said, they may be of no religion; or they may be so-called sceptics or agnostics or free-thinkers;—provided only that the 'patrons' will use diligence to secure that they be able reverent men, true thinkers, sincere lovers of and earnest inquirers after truth. I wish the lecturers to treat their subjects as a strictly natural science, the greatest of all possible sciences, indeed, in one sense, the only science,—that of Infinite Being, without reference to or reliance upon any supposed special exceptional

or so-called miraculous revelation. The lecturers shall be under no restraint whatever in their treatment of their theme. The lectures shall be public and popular, that is, open not only to students of the Universities, but to the whole community, without matriculation."

## II.—THE GUNNING VICTORIA JUBILEE LECTURESHIP.

### *Lecturer—*

With a view to promote the study of Natural Science among candidates for the ministry, and to bring out among ministers the fruits of study in Science, Philosophy, Language, Antiquity, and Sociology, Dr R. H. Gunning, of Edinburgh and Rio de Janeiro, has founded a Lectureship in the Faculty of Divinity of the University of Edinburgh, to be known as "The Gunning Victoria Jubilee Lectureship."

The Gunning Lectureship is a triennial appointment of the value of £100, and the appointment shall be made by the Faculty of Divinity. The lecturer may be any Scottish Presbyterian clergyman at home, or in the Mission field, eminent in Science, Philosophy, Language, Antiquity, or Sociology, and the lectures may be delivered in the University of Edinburgh, or such other place as the Faculty may appoint.

See Revised Scheme, p. 519 of CALENDAR 1889-90.

## Graduation in Divinity.

### REGULATIONS FOR GRADUATION IN DIVINITY.

*(Candidates who began the study of Divinity with a view to Graduation before 1st October 1896 are referred to the CALENDAR for 1896-97 and to previous CALENDARS.)*

I. No one is admitted to examination as a Candidate for the Degree of Bachelor of Divinity (B.D.) unless he be (1) a Graduate in Arts of the University, and have taken a complete Theological Course in a Scottish University or Universities, or in an institution or institutions specially recognised for the purpose by the University Court, or partly in a Scottish University or Universities and partly in such institution or institutions; or (2) a Graduate in Arts of any Scottish University or

other University specially recognised as aforesaid,<sup>1</sup> and has completed his Theological Course, of which not less than two years' attendance has been given in this University.<sup>2</sup>

II. The Examiners are the Professors of the subjects included in the examinations, and two additional Examiners appointed by the University Court. The mode of conducting the examination is fixed from time to time by the Senatus Academicus.

By a Supplementary Ordinance it is provided that, notwithstanding the provisions of Section I. hereof, the Senatus Academicus may, under this Section, admit candidates to examination in not more than three of the subjects, after the completion of the second session of attendance on their Theological Course.

III. The subjects of examination are arranged in two departments:—The First Department embracing—(1) Hebrew, and (2) Apologetic Theology, or the Evidences of Natural and Revealed Religion; and the Second Department embracing—(1) Ecclesiastical History, (2) Systematic Theology, and (3) Biblical Criticism and Biblical Antiquities.

IV. Every Student who at the time when these Regulations came into operation had completed a part of his Theological Course with a view to Graduation as B.D., under Regulations hitherto in force, and shall thereafter complete his course of study in conformity with such Regulations, may become a Candidate for the Degree of B.D. without complying with the provisions of these Regulations.

V. The Degree of B.D. is in no case conferred on persons who have not complied with the conditions hereinbefore set forth, and is not conferred *honoris causâ tantum*.

Candidates are required to communicate their names, together with evidence of their being qualified in terms of the above Regulations, to the Dean of the Faculty of Divinity, at least one week before the first day of the Examination.

The subjects of examination for 1901-1902 are as follows:—

#### DEPARTMENT I.

##### A.—For October 1901.

##### I. Hebrew—

- (1.) Questions in Grammar.
- (2.) Translation into Hebrew Prose.
- (3.) O. T. Introduction -- Historical Books, Minor Prophets, the Greek and Latin Versions.
- (4.) Hosea, Jonah.
- (5.) Psalms, Book ii.
- (6.) I Samuel i.-xviii. (the unpointed text).

<sup>1</sup> Degree of B.A. of Manitoba University recognised as qualifying for Graduation in Divinity.

<sup>2</sup> Institution—the Courses in which qualify for Graduation in Divinity—Westminster College, Cambridge.

*Graduation in Divinity.**B.—For April and October 1902.*

- (1 and 2.) As above.  
 (3.) O. T. Introduction—The Pentateuch, Psalms and Isaiah with the history of the Old Testament Canon.  
 (4.) Isaiah i.-xii.  
 (5.) Psalms, Books iii.-iv.  
 (6.) Deuteronomy i.-xviii. (the unpointed text).

*II. Apologetic Theology—**For October 1901 and April 1902.*

- (1.) The Causes of Modern Doubt and the Grounds of Fundamental Christian Beliefs.  
 (2.) The varieties of Naturalistic and Rationalistic Theology which have had representatives in Britain.  
 (3.) The Christian Doctrine of Immortality, the objections which have been taken to it, and the replies which have been given to them.

## DEPARTMENT II.

*For October 1901 and April 1902.**I. Ecclesiastical History—*

- (1.) The Main Facts in the Development of the Constitution, Doctrine, and Worship of the Church from 100 to 451 A.D. (2.) The History of the Church in Scotland during the 15th Century.

*II. Systematic Theology—*

- (1.) The History of Christian Dogmatics since the Reformation, and especially during the past century.  
 (2.) Christology.  
 (3.) Doctrine of the Church and Sacraments.

*III. Biblical Criticism and Biblical Antiquities—*

- (1.) Textual Criticism of the New Testament (including knowledge of the Manuscripts, Versions, and Critical Editions).  
 (2.) History of the Canon of the New Testament to the middle of the 3rd century.  
 (3.) Introduction to (1) the Catholic Epistles, and (2) the Gospels.  
 (4.) Greek New Testament. (1) The Epistles to the Corinthians; (2) Hebrews (with Introduction and Exegesis).

## FEES.

Fee for Degree of B.D., . . . . .	£5	5
<i>When the Examination is taken at two periods—</i>		
The Fee for the First is . . . . .	3	3
For the Second, . . . . .	2	2



Any Candidate who fails to pass pays a fee of 10s. 6d. for re-examination in each subject.

All Candidates for Examination or for Graduation, must be Matriculated Students of the year in which they appear for Examination or for Graduation.

# TIME-TABLE AND DATES OF ENTERING FOR EXAMINATIONS, 1901-1902.<sup>1</sup>

*Candidates are required to enter for each periodical Examination at which they desire to appear, and to state the subject or subjects in which they desire to be examined.*

## 1901.

Oct.	8.	Tu.	Names to be entered and fees paid <i>on or before</i> this date. <sup>1</sup>
„	15.	Tu.	Hebrew, 10 a.m. ; Apologetics, 2 p.m.
„	16.	Wed.	Ecclesiastical History, 10 a.m. ; Divinity, 2 p.m.
„	17.	Th.	Biblical Criticism, 10 a.m.

## 1902.

Mar.	18.	Tu.	Names to be entered and fees paid <i>on or before</i> this date. <sup>1</sup>
„	25.	Tu.	Hebrew, 10 a.m. ; Apologetics, 2 p.m.
„	26.	Wed.	Ecclesiastical History, 10 a.m. ; Divinity, 2 p.m.
„	27.	Th.	Biblical Criticism, 10 a.m.

Every Candidate for Examination or for Graduation must matriculate for the Academic year in which he appears for examination or for Graduation, and pay the Fee of £1 for Registration as a Member of the General Council (if not already a Member) *at least one clear day before the date of Graduation.*

The fees for Matriculation, for Examinations for Degrees, and for Registration of Graduates as Members of the General Council are payable at the Matriculation Office, University. When Candidates cannot attend personally to pay the fees, they should transmit them to T. GILBERT, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts*, crossed "*Union Bank of Scotland (High Street Branch), Edinburgh,*" but not by cheques on private accounts.

## THE DEGREE OF BACHELOR OF DIVINITY.

12th April 1901.

Archibald Scott Ballantyne, M.A. | William Alexander Curtis, M.A.  
Robert Greig Buchanan Millar, M.A.

<sup>1</sup> When names are not entered, and fees paid, on or before the stated dates, an additional or late-entry fee of ten shillings must be paid before the Candidate can be admitted to examination. A Candidate is not held to be entered for the Examination until his name is entered, the fee paid, and all the necessary certificates, &c., lodged.

DEGREE OF DOCTOR OF DIVINITY (D.D.).<sup>1</sup>

The Degree of Doctor of Divinity is conferred *honoris causâ tantum*,—and is granted in absence in special cases only. The Register of Doctors of Divinity begins in 1700, with the names of Edmund Calamy, Daniel Williams, and Joshua Oldfield. The names of Evans, Harris, and Isaac Watts follow in 1728. The Register now includes above 300 names.

The following is a list of those who have received the Degree of Doctor of Divinity in the years 1889-1901 inclusively<sup>2</sup>:—

1889.

\*Griffith John.  
\*Professor Abraham Kuenen.  
Archibald Henry Sayce, M.A.  
Norman M. L. Walker.

1890.

David Douglas Bannerman.  
R. H. Lundie, M.A.  
Canon J. H. Overton.

1891.

Richard Glover.  
Robert Hutton, M.A.  
\*John Gibson Paton.  
D. W. Simon, M.A., Ph.D.

1892.

William Balfour.  
Cornelius Giffen.  
Newham Hall.

1893.

Thomas Nicol, B.D.  
Thomas B. W. Niven.  
George Adam Smith.  
James Wells, M.A.

1894.

William Hastie, M.A., B.D.  
J. A. M'Clymont, M.A., B.D.  
J. C. M'Phail.  
William Muirhead.

1895.

Robert G. Balfour.  
\*Alexander Marshall, M.A.  
Charles Moinet, M.A.  
John Patrick, M.A., B.D.  
J. Guinness Rogers, B.A.  
\*David Sidey.

1896.

Charles Gore, M.A.  
William Miller, C.I.E., LL.D.  
David Clement Scott, M.A., B.D.  
Alexander Williamson.

1897.

H. M. Gwatkin, M.A.  
J. B. Hastings, M.A.  
W. P. Paterson, M.A., B.D.<sup>3</sup>  
R. J. Sandeman.

1898.

George Macalister, M.A.  
M. Henri Bois.  
Alexander Martin, M.A.  
Peter Thomson, M.A., B.D.

1899.

J. Edgar Hill, M.A., B.D.  
Malcolm MacColl, M.A.  
David Somerville, M.A.

1900.

\*William Bannerman.  
Charles Martin Grant, M.A., B.D.

<sup>1</sup> Those to whom the Degree has been offered, if unable to be present at the Graduation Ceremonial immediately ensuing, may present themselves at any subsequent ceremonial, on giving at least a week's notice.

<sup>2</sup> The names of those who received the Degree, prior to 1859, will be found in the "Catalogue of the Graduates in the Faculties of Arts, Divinity, and Law of the University, since its foundation," published in 1858, and the names of those who received the Degree from 1859 to 1888, both years included, will be found in the List of Graduates, published in 1889.

<sup>3</sup> Conferred *in absentia*.

12th April 1901.

Rev. John Richardson Illingworth, M.A., Rector of Longworth.

Rev. John Keith, M.A., B.D., Minister of Largs.

Rev. John Methven Robertson, M.A., Minister of St Ninians.

Rev. David Morrison Ross, M.A., Westbourne United Free Church Glasgow.

## Bursaries, Scholarships, Fellowships, &c.

### I.—BURSARIES.

See note under Bursaries, page 160.

#### A.—PRESENTATION BURSARIES.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	Years.	Annual Allowance to each Bursar.	Patrons.
I.	1703	Agnes Nairne.	£3 0 0	1	1	..	Senatus Academicus.
II.	1715 1764	Sir James M'Lurg of Vogrie, sometime Dean of Guild of Edinburgh; and Rev. John Penman, Minister of Bothkennar.	20 0 0	1	4	£20 0 0	Capt. R. G. G. Gil-mour of Craigmillar, 1st and 3rd Presentations. The Dean of Guild of Edinburgh, 2nd Presentation. Heirs of William Brown, surgeon, 4th Presentation.
III.	1766	Rev. Robert Alexander, Minister of Girvan.	About 19 0 0	1		About 19 0 0	Kirk-Session of Girvan and Presbytery of Ayr.
IV.	1838	Robert Blair, D.D., Barton St Andrews, Norfolk	16 0 0	1		16 0 0	Governors of George Heriot's Trust.
V.	1838	Do. Do	About 23 0 0	1	4	About 23 0 0	The Principal, and Profs. of Hebrew, Divinity, Church History.

I. In abeyance at present.

II. The *M'Lurg and Penman Bursary* is tenable for four years at the Theological Classes. No person shall be presented to the Bursary who is not a Master Arts of a Scottish University.

III. This Bursary consists of the interest of £420, lent on heritable security, and £75, 17s. of accumulated interest. It must be held by a Student from the parish Girvan, presented by the Session; whom failing, by one within the Presbytery Ayr, to be appointed by the Presbytery.

IV. The *Blair Bursary* can be held only by a young man who has been educated in George Heriot's Hospital School, and has become a Student of Divinity in the University of Edinburgh.

V. To be applied for the benefit of a Student of Divinity, whether a graduate or not. *Bursar*—1898, *Alexander Barrie Robb*.

### B.—COMPETITION BURSARIES.<sup>1</sup>

*See note under Bursaries, page 160.*

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
I.	1646	Buchanan of that Ilk.	£24 0 0	1	3	£24 0 0	Town Council.
II.	1666	William Struthers &	23 7 9	1	3	23 7 9	Do.
III.	1685	Archbishop Leighton.					
	1687	Andrew Ramsay and Sir Andw. Ramsay of Abbotshall.	16 13 4	1	3	16 13 4	Do.
IV.	1695	King William III.	50 0 0	2	2	25 0 0	Senatus Academicus
V.	1867	Miss Mary Ettles of Inverness.	101 7 6	3	3	About 33 15 10	Senatus.
VI.	1873	Grierson of Ogcassle's Trustees.	80 0 0	3	1	26 13 4	Senatus.
VII.	1878	Mrs Isabella Webster.	125 10 0	2	3	47 5 0	} Senatus.
VIII.	1878	Dr Andrew Thomson	100 0 0	1	3	31 10 9	
IX.	1879	Mrs Barbara Mylne.	30 0 0	4	3	25 0 0	Trus. of Dr Thomson.
				1	3	30 0 0	Moderator, Procurator, and Principal Clerk of General Assembly.
X.	1838	J. Stewart Hepburn of Colquhalzie, Esq.	13 2 6	1	3	13 2 6	Committee of the Presbytery of Edinburgh.
XI.	1858	Do. Do.	13 2 6	1	3	13 2 6	Do.
XII.	1864	Do. Do.	13 2 6	1	3	13 2 6	Do.
XIII.	1882	William Renton.	20 0 0	1	3	20 0 0	Prof. of Theology.
XIV.	1884	Robert Hunter.	37 5 0	2	2	About 18 12 6	Principal and Prof.
XV.	1889	James Simson, Edinburgh.	175 0 0	7	3	25 0 0	Presbytery of Edinburgh.
XVI.	1892	Thomas Lockerby, London.	About 32 0 0	1	3	About 32 1 0	Senatus.
XVII.	1856	John Sharp, Esq., Perth.	18 0 0	1	4	18 0 0	The Presbytery of Perth.
XVIII.	1900	Miss Janet M. Brown.	30 0 0	3	3	10 0 0	Senatus.

I. The Buchanan Bursary is open for competition to all Masters of Arts of any of the Universities of Scotland, or to Students who have passed the necessary Examinations for the Degree of M.A., but have deferred their Graduation with a view to Honours, and who are entering on their first or second Session in the Faculty of Divinity in the University of Edinburgh. No person is admissible to competition

<sup>1</sup> The values of these Bursaries are subject to deduction of the fees paid to the Examiners.

who has for more than one Session been a Student in the Faculty of Divinity in any of the Scottish Universities. The Bursar holds the Bursary for three years, subject to this condition, that he shall, during that period, give regular attendance, as a Student of Theology, in the University. If it appears to the Senatus Academicus desirable, for the purpose of distributing the benefits of competitive Bursaries in Theology among Students of different years, it is lawful, for that purpose only, to appoint a Student for a shorter period. No person can hold the Bursary along with any other Bursary, Fellowship, or Scholarship in any Scottish University. *Bursar—1900, J. A. Fleming, M.A.*

II. The Struthers and Leighton Bursary is open by competition to all Students who are Masters of Arts, or who have passed all the examinations necessary for admitting them to the degree of Master of Arts, and who are entering on their first Session of attendance in the Faculty of Divinity in the said University. *Bursar—1897, James Black, M.A.*

III. By Ordinance, No. 81, of the Univ. Com., and subsequent Order in Council the regulations for this Bursary are the same as those for the Buchanan Bursary. *Bursar—1898, G. H. Donald.*

IV. By Ordinance, No. 76, of the Universities' Commissioners, and subsequent Order in Council, each King William Bursary is open to competition to all Masters of Arts of any of the Universities of Scotland, or Students who have passed the necessary examinations for the Degree of M.A., and who have attended for one Session, and no more, in the Faculty of Divinity in the University of Edinburgh: Provided that no person shall be a competitor who has attended for one or more Sessions in the Faculty of Divinity in any other of the Scottish Universities. The examinations in the competition shall be conducted by the Professors in the Faculty of Divinity in the University. Each Bursar shall hold his Bursary for two years, subject to the condition that he shall, during that period, give regular attendance as a Student of Theology in the University. No person shall hold either of the Bursaries along with any other Bursary, Fellowship, or Scholarship of any Scottish University. When the two Bursaries fall vacant at one time, one Bursar shall be appointed for two years, and the other for one year. *Bursar—1899, David Nelson, M.A.*

V. Founded in memory of her brother, J. Ettles, Esq., of Havannah. Open to those who have passed all the examinations for M.A., and are in the first year of their theological course. Cannot be held with any other Bursaries or Scholarships. See Deed of Foundation in CALENDAR for 1867-68. *Bursars—1898, C. S. Mackenzie, M.A.; 1899, Oswald B. Milligan, M.A.; 1900, Adam McKay, M.A.; M. F. Simpson, M.A.*

VI. As in the case of the Faculty of Arts (see No. XLVII.), a student from the parishes of Crawford or Leadhills, is, if found duly qualified in respect of attainments, appointed to a Bursary in his first year, and holds it (unless he has failed to show himself a diligent student) to the end of his Theological curriculum. Failing a student from those favoured parishes, the Bursary or Bursaries will be thrown open to competition, but the winner only holds his Bursary for one year in each year. In the second and third years a student from Crawford or Leadhills has again a preference, but holds the Bursary for one year only. Preferential candi-



dates to lodge their applications with the *Clerk of Senatus* on or before 1 November. See p. 372 of CALENDAR, 1877-78. *Bursars*, 1899—Second year *John Weir*; Third year, *Bruce M'Ewen, M.A.*

VII. Founded by Mrs Isabella Webster, 38 Heriot Row, Edinburgh, in memory of her husband, George Webster, Esq. There are three Bursaries, two of about £47 each, and one of £31, 10s., open to Students of Divinity in connection with the Church of Scotland in their first year, who have successfully passed all their Examinations for the degree of M.A. in any Scottish University, whether they have actually graduated or not. Each is tenable for three years. See Deed of Foundation in CALENDAR for 1878-79, p. 377. *Bursar*—1897, *John Dickie, M.A.*; 1898, *William A. Curtis, M.A.*; 1899, *Wm. A. Moraw, M.A.*; 1900, *G. V. Dunnett, M.A.*

VIII. *Preferential Candidates* for the Thomson Bursaries must apply to Messrs Traquair, Dickson & Maclaren, 11 Hill Street. Candidates of the name of Thomson or Traquair, or natives of the town or county of Dumfries, or of the city of Edinburgh, preferred. The subjects of Examination are Latin, Mathematics, Moral Philosophy, Elementary Hebrew, Apologetics, and Greek Testament. See p. 374 of CALENDAR for 1880-81. *Bursars*—1898, *James Kirk, M.A.*; 1900, *J. B. Jamieson, M.A.*

IX. *Mylne Bursary*.—Founded by Mrs Barbara Macaulay or Mylne, in memory of her husband, the Rev. Andrew Mylne, minister of the parish of Dollar. The Bursary (being the free proceeds of £750) which is for behoof of Students for the ministry of the Church of Scotland, of Scottish birth, tenable during the curriculum in Divinity, is awarded at the end of the session, after examination (of first year's students) on the subjects taught in the Theological Classes during the session. No one may become a Candidate who has not given his whole time to study during the session preceding the date of Examination, nor may the holder engage in paid work during any session in which he holds the Bursary. It cannot be held along with any other Bursary, Scholarship, or Endowment. See Deed of Foundation at page 377 of CALENDAR for 1880-81. *Bursar*—1899, *D. A. Morrison.*

X., XI., and XII. The sums attached to these Bursaries are payable to Divinity Students of the Church of Scotland of the first or second year towards the expense of their education at the University of Edinburgh. Each is tenable for three years. For one bursary Gaelic-speaking students have a preference.

XIII. Founded by the late William Renton, of 20 Royal Terrace, Edinburgh. The Faculty of Theology are the Patrons and Trustees. The Bursary may be held for three years, if the Bursar continues so long to prosecute his studies in Theology at the University of Edinburgh, with a view to the ministry in the Church of Scotland, and if not, then for the whole period he continues at the same. The student presented must have attained the age of sixteen, and not exceed the age of twenty-one years, and must be appointed after an examination in the month of November on such subjects as the Professors of the Faculty of Theology consider proper. *Bursar*—1897, *L. M'Glashan, M.A.*

XIV. Founded by the late Robert Hunter, Dalhousie, Chesters; the Principals and Professors being Patrons. These Bursaries are for the benefit of Students of



the Church of Scotland, and are awarded at close of first Session in Divinity, and are tenable for two years. Bursars must attend two Sessions in Chemistry and Geology, taking at least one of these Classes each Session. Students of the name of Hunter and Hamilton from the parishes of Temple or Cockpen have preference, but preferential Candidates must attain to a fixed percentage. Bursars must produce certificates of diligence in the Classes of Chemistry and Geology. See excerpt from Deed of Foundation, page 437 of CALENDAR for 1885-86. Vacant.

XV. These Bursaries are open to Students who are entering on their first Session in Divinity, and are tenable for three years. For further details and subjects of examination (which differ somewhat from the University Examination for first year's Bursaries), apply to the Rev. G. T. Jamieson, Clerk to the Presbytery of Edinburgh, The Manse, Portobello. Bursars—1897, *John Dickie, M.A.*; *A. J. Campbell, B.A.* 1898, *William A. Dunnott, M.A.*; *William Murdie, M.A.* 1899, *David Heggie*; *David H. Sawers.*

XVI. Founded by the late Thomas Lockerby, Esq., London. The Bursary is tenable for three years, and is open to "Students who desire to become ministers of the Church of Scotland only." See Excerpt from Disposition, page 545 of CALENDAR for 1890-91. Bursar—1898, *A. Scott Ballantyne.*

XVII. *Sharp Bursary.*—This Bursary is of the annual value of £18, tenable for four years. The Bursar must be a Student of Divinity of the Church of Scotland, and may prosecute his studies at any one of the Scottish Universities, reference to any student being a native of or subject to the jurisdiction of the presbytery of Perth. Apply to the Clerk to the Presbytery of Perth.

XVIII. *Three Misses Brown, of Spring Gardens, Bursaries*, each of the annual value of £10, tenable for one year. One Bursary will be awarded to a student of the first year, one to a student of the second year, and one to a student of the third year. Bursar—1901, *John A. Spence* (third year).

—PRESENTATION BURSARIES, open only to Graduates or Students who have passed the necessary Examinations for the Degree of M.A., but have deferred their Graduation with a view to Honours.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
I.	1695	Robert Bayne of Pitcairley.	£25 0 0	1	3	£25 0 0	Society for Benefit of Sons of the Clergy.
II.	1695	James Nairne.	16 13 4	1	3	16 13 4	Prof. of Divinity.

By Ordinance, No. 71, of the Universities' Commissioners, and subsequent Order in Council, the following are the regulations as to this Bursary: Each Bursar shall hold the Bursary for three years, subject to the condition that he shall, during that period, give regular attendance as a Student in Theology in the University of Edinburgh. No person shall hold the Bursary along with any

other Bursary, or with any Scholarship in the University. *Bursar*—

II. This Bursary is tenable for three years, or for such period as the Bursar shall give regular attendance as a Student of Theology in the University of Edinburgh. *See Ordinance, No. 67, of the Universities' Commissioners, and subsequent Order in Council. Bursar—1898, Bruce M'Ewen, M.A.*

D.—BURSARIES gained in Faculty of Arts, the holders of which are at liberty to study in the Faculty of Divinity.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
I.	1809	Dr Donald Grant, London.	£180 0 0 About	4	4	£45 0 0 About	Dr Grant's Trustees
II.	1846	John Jamieson, Edinburgh.	26 0 0 About	1	4	26 0 0 About	Principal and two Professors.
III.	1871	The Sibbald Trustees.	150 0 0	5	3	30 0 0	The Trustees of D. J. R. Sibbald.
V.	1889	Daniel Maclaurin, London.	64 5 0	1	4	64 5 0	Town Council.

I. *See under Faculty of Arts.*

II. *See under Faculty of Arts.*

III. *See under Bursaries in Arts.*

IV. *See under Faculty of Arts.*

## II.—PRIZES.

*See note under Bursaries, page 160.*

### I.—BARTY MEMORIAL PRIZE.

The Barty Memorial Prize of £20 for scholarship in Hebrew and Hellenistic Greek is open to entrants to the Divinity Halls of the four Scottish Universities.

### II.—HEPBURN PRIZE.

The Hepburn Prize of £25 (which may be divided), open to all Students in actual attendance at the Divinity Hall, may be awarded annually for an essay on a prescribed subject.

### III.—THE GUNNING VICTORIA JUBILEE PRIZES.

With a view to promote the study of Natural Science among candidates for the ministry, and to bring out among ministers the fruits of study in Science, Philosophy, Language, Antiquity, and Sociology, Dr R. H. Gunning, of Edinburgh and Rio de Janeiro, has founded ten prizes in the Faculty of Divinity of the University of Edinburgh, to be known as "The Gunning Victoria Jubilee Prizes."

These prizes are ten in number, and comprise a series of five prizes of £50, £40, £30, £20, and £10, for excellence in Theological subjects, and a series of five prizes of similar values for excellence in Natural

Science subjects. In their order the prizes in each series correspond in value. A minimum standard of proficiency will be required in each series. The successful competitors may each take both the prize in the Theological, and the prize in the Natural Science series to which their marks may respectively entitle them.

The prizes are competed for triennially at the close of the Divinity Session, and are open to all Students of the Church of Scotland, or other Scottish Churches holding the Confession of Faith, who are graduates of this University, or have attended two classes in the Faculty of Divinity in this University, and who have completed their Theological curriculum within two years of the close of the session when the competition takes place.

The examination in the Natural Science series will be on Natural History, Botany, and Geology, and of the same standard as the First B.Sc. Examination in Pure Science. The examination in the Theological series will be in Theology proper, the Language and Literature of the Old Testament, Ecclesiastical History, and Biblical Criticism.

The Examiners are the Professors of the subjects of examination in the University of Edinburgh; with the addition of a member of the Senatus of the New College, to be appointed by the Faculty of Divinity. See Revised Scheme, p. 519 of CALENDAR 1889-90.

The next examination under this scheme will be held at the close of Session 1901-1902.

1899. *Theological Series*—1st Prize not awarded.

2nd „ not awarded.

3rd „ James Young Simpson, M.A.

4th „ not awarded.

5th „ not awarded.

*Natural Science Series*—1st Prize not awarded.

2nd „ James Young Simpson, M.A.

3rd „ not awarded.

4th „ not awarded.

5th „ not awarded.

### III.—SCHOLARSHIPS.<sup>1</sup>

*See note under Bursaries, page 160.*

#### I.—PITT CLUB DIVINITY SCHOLARSHIP.

This Scholarship was instituted in 1862 by the Pitt Club, is of the

<sup>1</sup> It has been agreed by the Senatus and the Faculty of Divinity, in regard to the Fellowships and Scholarships of the funds of which they are severally the administrators, that

1. The *Pitt Theological Scholarship* shall be competed for when it falls vacant.

2. The *Aitken Theological Scholarship* shall be reserved from competition when it falls vacant in the same year with the Pitt.

3. The *Glover Divinity Scholarship* shall (according to its conditions) not be open to competition when the Pitt or Maxton may be open, and shall be similarly reserved when the Aitken is open.

4. That meanwhile the *Maxton* be competed for when it is vacant.

annual value of £99, 13s. (under deduction of Examiners' fees), and tenable for three years. By Ordinance No. 77, of the Universities' Commissioners, this Scholarship is open to competition to all Masters of Arts of any of the Universities of Scotland who have given regular attendance in the Faculty of Divinity in the University of Edinburgh for three complete Sessions, and who are in the course of studying, with the view of becoming Clergymen of the Church of Scotland. No person is admissible who has been entered as a Student of Divinity more than six years prior to the time of the competition.

Candidates are examined on (1) The Evidences of Revealed Religion; (2) Systematic Theology; (3) Hebrew; (4) Church History; (5) Biblical Criticism. It cannot be held with any other Scholarship, Fellowship, or Bursary of any Scottish University, or along with any parochial or pastoral charge, whether as minister or assistant.

1901. *William A. Curtis, B.D.*

## II.—MAXTON DIVINITY SCHOLARSHIP.

This Scholarship was founded by the Trustees of the late John Maxton, Esq., in 1867, is of the annual value of £42, 8s. (under deduction of Examiners' fees), and is tenable for three years. It is open only to Students who are members of the Established Church of Scotland, and who have completed the course of study in the Faculty of Divinity in the University of Edinburgh. *See* Deed of Foundation, at p. 234 of CALENDAR for 1867-68.

1899. *Andrew Tweedie, M.A., B.D.*

## III.—THE GLOVER DIVINITY SCHOLARSHIP.

This Scholarship was founded in 1875 by Subscribers to a Fund for commemorating the memory of the Rev. W. Glover, D.D., and by the University Endowment Association. It is of the annual value of about £40 (under deduction of Examiners' fees), tenable for three years, and open to all Masters of Arts of any of the Universities of Scotland who have finished their study of Theology, before entering the Church of Scotland, within six years, and who have attended the last Session of their course at least in the University of Edinburgh. It cannot be held with any other Divinity Scholarship or Bursary in any Scottish University, and it is not offered for competition in any year where there is a vacancy in the Pitt Divinity Scholarship or the Maxton Divinity Scholarship. *See* Deed of Foundation, at p. 343 of CALENDAR for 1875-76.

1900. *C. Gordon Mackenzie, B.D.*

## IV.—THE AITKEN THEOLOGICAL SCHOLARSHIP.

This Scholarship, founded in 1875 by bequest of the Rev. David Aitken, D.D., formerly minister of Minto, is of the annual value of £112, 12s. 6d. (under deduction of Examiners' fees). Its purpose is to

make provision for the study of Church History and Biblical Criticism at one or more University Seats in Germany, or elsewhere on the Continent of Europe, in the case of meritorious students at Edinburgh University. It is to be awarded, after competitive examination (on due proficiency being shewn), to a Student in Divinity of the University, of Edinburgh, who is a Graduate in Arts of that University of not more than four years' standing. It is tenable for two years; but the Senatus may extend the term for another year if it appear to them desirable. The time of the competition to be fixed and publicly intimated by the Senatus at least three months before; and the Senatus are also at liberty to prescribe whether one Semester or two Semesters in the foreign University shall be attended in each year. It is not offered for competition in the same year as the Pitt Divinity Scholarship or the Glover Divinity Scholarship. See Deed of Foundation at p. 344 of CALENDAR for 1876-77.

#### V.—THE DAVID KIDD DIVINITY SCHOLARSHIP.

This Scholarship, which is of the annual value of £36 (under deduction of Examiners' fees), is tenable for three years, and is awarded, after competitive examination in Theology (same as for B.D.), to students of any of the Universities of Scotland who are natives of Scotland, and who have finished their course of study with the view of becoming Ministers of the Church of Scotland. See Deed of Foundation in CALENDAR for 1879-80, p. 354.

1901. *Archibald S. Ballantyne, B.D.*

#### VI.—VANS DUNLOP SCHOLARSHIP IN HEBREW AND ORIENTAL (SEMITIC) LANGUAGES.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed six academic years either in this University alone or in this and any other University or Universities together; and who have attended at least two courses under the Professor of Hebrew and Oriental Languages. For General Regulations, see under Faculty of Arts.

Candidates will be examined in Hebrew, Syriac, and Arabic.

The Examiners are the Professor of Hebrew and Semitic Languages, and an Examiner appointed by the Senatus. The next Competition will take place at the end of March 1902.

1899. *Richard Bell, M.A.*

#### VII.—VANS DUNLOP SCHOLARSHIP IN HISTORY.

(See *Scholarships in Faculty of Arts.*)

#### VIII.—BRUCE OF GRANGEHILL AND FALKLAND SCHOLARSHIPS.

These Scholarships were founded in 1865 by Mrs Tyndall Bruce of Falkland, and are of the annual value of £100. They come into



operation only when a vacancy occurs in any one of the three Scholarships of this name in the Faculty of Arts, by the death, resignation, or dismissal, of a Scholar during the period of his tenure of the Scholarship; and are tenable in this Faculty during the remainder of that period. They cannot be held with any other Scholarship or Fellowship of a Scottish University, or with any situation yielding an income of £100 a year. The subjects of Examination are prescribed from time to time by the Faculty.

1899. *George Douglas Shepherd, M.A.*

#### IX. and X.—THE JEFFREY SCHOLARSHIPS.

These Scholarships, two in number, were founded in 1887 by Miss Jane Jeffrey of Victoria Terrace, Portobello. They are each of the annual value of about £69 (under deduction of Examiners' fees), and are tenable for one year. They are awarded annually for special proficiency in the subjects embraced in each of the four departments of Divinity, Hebrew and Semitic Languages, Ecclesiastical History, and Biblical Criticism; and are open to Students of Divinity in connection with the Church of Scotland who shall have given regular attendance for at least one Session on the Divinity Classes in this University, including the class with which the Scholarship competed for is specially connected. They are competed for in the following order:—first year, Divinity, and Hebrew and Oriental Languages; second year, Ecclesiastical History and Biblical Criticism; and so on from year to year. At the close of Session 1900-1901 the Scholarships in Hebrew and Divinity are open. *See Deed at page 497 of CALENDAR for 1888-89.*

1901. *Divinity—William A. Curtis, B.D.*

*Semitic Languages—Oswald B. Milligan, M.A.*

#### XI.—COBB SCHOLARSHIP.

This Scholarship, founded in 1889, is a bequest by the late Miss Matilda Johnston Cobb, Broughty Ferry. It is of the annual value of £30 (under deduction of Examiners' fees), and is tenable for three years. The subjects of Examination are Hebrew, Greek, Latin, and Mathematics, and the Scholarship is open to competition amongst Students who are entering on the study of Divinity with a view to becoming Ministers of the Church of Scotland.

1899. *Andrew M. Anderson, M.A.*

#### XII. GRAY SCHOLARSHIP FOR RESEARCH.<sup>1</sup>

#### XIII. GEORGE SCOTT TRAVELLING SCHOLARSHIP IN SEMITIC AND INDIAN LANGUAGES.<sup>1</sup>

<sup>1</sup> For particulars, see Scholarships in the Faculty of Arts.



#### XIV.—THE SWINEY LECTURESHIP ON GEOLOGY.

This Lectureship is open to Graduates in any of the Faculties in the University who have obtained their Degrees after examination. For further particulars, see page 288.

#### SCHOLARSHIPS, BURSARIES, AND UNIVERSITY PRIZES, OPEN FOR COMPETITION IN THE FACULTY OF DIVINITY DURING THE ACADEMIC YEAR COMMENCING 1ST OCTOBER 1901.<sup>1</sup>

##### I. PRESENTATION BURSARIES.<sup>2</sup>

1. *The M'Lurg and Penman*, No. II., page 303. May be open.
2. *The James Nairne*, No. II., page 307. May be open.
3. *The Bayne*, No. I., page 307.

##### II. COMPETITION SCHOLARSHIPS AND BURSARIES.<sup>2</sup>

###### I. SCHOLARSHIP.

1. *Vans Dunlop Scholarship in History*, No. XXX., page 185. The Competition will take place on the third Monday, Tuesday, and Wednesday of October 1901, beginning at 10 A.M. each day. Names to be entered *on or before* 27th September.

The Subjects of Examination are—

- (1) History of Great Britain to 1885.
- (2) Constitutional History of (a) England, 1307-1536; (b) United States, 1763-1789; (c) France, 1830-1884.
- (3) History of Scotland, 1603-1707, with special reference to the Union of 1707.

###### II. BURSARIES, &C.

The Bursary Examination at the beginning of Session 1901-1902 will be held on Friday, 1st, and Saturday, 2nd November, commencing at 10 A.M. each day, when the following Bursaries will be open for competition:—

1. *The Struthers and Leighton Bursary*, No. II., page 305.
2. *One Webster Bursary*, No. VII., page 306.
3. *One Thomson Bursary*, No. VIII., page 306. The Candidates must be matriculated Students (not necessarily Graduates) entering on their first Session in Divinity, and are required to intimate their intention to compete to the Agents for the Trustees, Messrs Traquair, Dickson, & Maclaren, W.S., 11 Hill Street, Edinburgh, before 1st November 1901.
4. *Renton Bursary*, No. XIII., page 306.

<sup>1</sup> The values of the Scholarships, Bursaries, and Prizes are subject to variation consequent on the rise or fall of the rate of interest, &c. For further information and for information regarding other Scholarships, Bursaries, and Prizes, &c., see above.

<sup>2</sup> See Note under Scholarships, page 176.

314 *Bursaries, &c., Vacant at end of Session 1901-1902.*

5. *The Ramsay Bursary*, No. III., page 304.

6. *The Lockerby Bursary*, No. XVI., page 304.

The subjects of examination for the above, and for *any other ordinary competition Bursary for first year's Students that may be vacant* at the opening of the Session will be—

(1.) *Latin*—Tertullian's "Apologeticus," and translation from English into Latin prose.

(2.) *Greek Testament*—Romans, 1 Corinthians, and translation from English into New Testament Greek.

(3.) *Mathematics*—"Euclid," Books I.-VI.; Algebra and Elementary Trigonometry.

(4.) *Moral Philosophy*—Seth's "Study of Ethical Principles."

(5.) *Hebrew*—Davidson's Grammar and Exercises.

(6.) *Apologetics*—Flint's "Antitheistic Theories."

7, 8, 9. *Grierson Bursaries*, No. VI., page 305. Preferential candidates to lodge their applications with the *Clerk of Senatus* on or before 1st November 1901.

The subjects of examination for the Grierson Bursaries, if there be competition, will be :—

For the *first year*—

Same as for ordinary Competition Bursaries, except that *Apologetics* is omitted.

For the *second year*—

(1.) *Latin*—Lucretius, Book V., and Livy, Book II.

(2.) *Greek Testament*—Gospel of St Matthew and 2 Corinthians.

(3.) *Hebrew*—Class work of preceding Winter Session, with the Book of Ruth in addition.

(4.) *Divinity*—Class work of preceding Winter Session.

(5.) *Ecclesiastical History*—To 325 A.D.

(6.) *Biblical Criticism*—Introduction to the Synoptic Gospels.

For the *third year*—

(1.) *Apologetic Theology*—Butler's "Analogy."

(2.) *Hebrew*—Class Work of preceding Winter Session.

(3.) *Ecclesiastical History*—To 325 A.D., and of Scotland, 1500 A.D. to 1600 A.D.

(4.) *Biblical Criticism*—The Second Epistle to the Corinthians (Introduction and Exegesis).

10, 11. *Two Simson Bursaries*, No. XV., page 307, each of the annual value of £25, and tenable for three years, are open to students who are entering on their first session in Divinity. For further details and subjects of examination (which are very nearly the same as those prescribed above for first year's bursaries), apply to the Rev. G. T. Jamieson, Clerk to the Presbytery of Edinburgh, The Manse, Portobello.

12. *A Hepburn Prize*, £25 (which may be divided), for the best Essay. Subject—"The Resurrection of Christ: its evidential value and doctrinal significance," to be competed for by Students of second or subsequent year. The Essay not to exceed fifty pages 4to, and to be handed to Rev. Dr Scott, 16 Rothesay Place, Edinburgh, on or before 1st December 1900.

13. *Barty Memorial Prize*, of about £20, for Scholarship in Hebrew and Hellenistic Greek, is open to entrants to the Divinity Halls of the four Scottish Universities. Competitors to apply to J. W. Barty, Esq., Dunblane.

14-16. *Three Hepburn Bursaries* (each about £14), open for competition by all Students of first or second year in Divinity. For one of these, preference given to Gaelic-speaking Students. Subjects of Examination: Butler's "Analogy," and Lightfoot's "Epistle to the Galatians," with the Introduction, Notes, and Dissertations. For particulars, apply to the Rev. Dr Scott, minister of St George's, Edinburgh, or Rev. G. T. Jamieson, Clerk to the Presbytery of Edinburgh, The Manse, Portobello.

At the close of Session 1901-1902, the following may be open for competition:—

#### I. SCHOLARSHIPS.

1. *Vans Dunlop Scholarship in Hebrew and Oriental (Semitic) Languages*, No. VI., page 311. The competition will take place on *Tuesday, 25th March 1902*, and following days, beginning at 10 A.M. each day. Names to be entered *on or before 15th March*.

The following are the subjects of examination:—

(a) *Hebrew* (two papers).—Introduction to, and translation, criticism, and exegesis of Psalms, Books III. and IV., Hosea and Deuteronomy. Hebrew Grammar and Composition. Some of the passages set will be unpointed.

(b) *Syriac* (one paper).—Rödiger's *Chrestomathia Syriaca*, extracts I.-IV., VIII., IX.; St Mark's Gospel (Peshittā). Syriac Grammar and Composition.

(c) *Arabic* (one paper).—Bruennow's *Chrestomathy of Arabic Prose Pieces*, pp. 1-22, 44-55; *The Kor'an*, third Sūra. Arabic Grammar and Composition.

2. *The Aitken Scholarship*, No. IV., page 310.
- 3, 4. *Two Jeffrey Scholarships*, Nos. IX. and X., page 312.

The subjects of Examination are :—

*Ecclesiastical History*—

1. The Constitution, Doctrine and Worship of the Church from 323 to 451 A.D.
2. The Schism between the Greek and Roman Church.
3. History of the Church in Scotland from 1560 to 1690.

*Biblical Criticism*—

1. Introduction to the Gospels.
2. Westcott's "Canon of the New Testament."
3. Hebrews, Ephesians, and the Catholic Epistles (with Introduction and Exegesis).
5. *The Maxton Scholarship*, No. II., page 310.

## II. BURSARIES.

1, 2. *Two King William Bursaries*, No. IV., page 305. The Subjects of examination for this Bursary will be the work of the Session in the Classes of Divinity, Ecclesiastical History, Biblical Criticism, and Junior Hebrew.

3, 4. *Two Robert Hunter Bursaries*, No. XIV., page 306. The subjects of examination are the same as for the King William Bursary. These Bursaries cannot be held along with any other Bursary, Scholarship, or Fellowship in any Scottish University.

5. *The Mylne Bursary*, No. IX., page 306. Examination as for King William Bursary.

6-8. *Three Misses Brown, of Spring Gardens, Bursaries*, No. XVIII., page 307.

## III. FUNDS FOR SPECIAL STUDY AND RESEARCH.

1. *William Dickson Travelling Fund*, see page 190.
2. *Earl of Moray Bequest for the Promotion of Original Research*, see page 191.

## IV. PRIZES.<sup>1</sup>

1-10. *Gunning Victoria Jubilee Prizes*. — The examination in the Natural Science series will be on Natural History, Potany, and Geology, of the same standard as the First B.Sc. Examination in Natural Science. See No. III., page 308. The examination in the Theological series will be :—

*Divinity*.—(1) Christianity in relation to Science and Morals. (2) The Doctrines of the Personality of God and the Incarnation of Christ.

*Hebrew*.—1 Samuel, chs. i.-xviii. ; Psalms, Books III. and IV.

<sup>1</sup> See Note under Scholarships, page 176.

*Ecclesiastical History*.—The main facts in the Development of the Constitution, Doctrine and Worship of the Church, from 150 to 323 A.D.

*Biblical Criticism*.—(1) Introduction to the Gospels. (2) Epistle to the Romans (with Introduction and Exegesis).

11. *The Lord Rector's Prize*, of twenty-five guineas, for the best Essay on "South Africa, its past, present, and probable future." The Prize is open to Students of the University at 1st November 1901, and to Graduates of not more than two years' standing. Essays to be lodged with the Secretary of Senatus on or before 1st November, each Essay distinguished by a motto, and accompanied by a sealed envelope containing the name, address, and University standing of the Candidate.

12. *Edinburgh University Club of London Prize*, of twenty guineas, for the best Essay on the following subject: "The Teaching of Jesus with regard to the 'Kingdom of God' compared with philosophical conceptions of the '*summum bonum*.'" Open to Graduates of the University of not more than two years' standing. Essays to be lodged with the Secretary of the Senatus on or before 1st November 1901, each bearing a motto, and accompanied by an envelope containing the name, address, and University standing of the Candidate.

13-15. *The Trustees of Gray's Prize Essay Fund* may offer three Prizes of £15, £10, and £5 for the first, second, and third best Essays on "Evolution in its relation to Christianity." Rev. John Blackwood Munro, Duns, Secretary to the Trustees.

The attention of all Bursars in the Faculty of Divinity is particularly called to the following Regulation:—

Each Scholar or Bursar, when he applies to the Factor for a payment, must produce a Certificate, signed by the Dean or the Professor to whose department the Foundation is attached, attesting his regular attendance on the proper Classes, &c., or otherwise that he has fulfilled the conditions attached to the Foundation. Payments are made by the Factor for the University, Mr Henry Cook, W.S., 61 North Castle Street, Edinburgh, on and after 14th November for the Martinmas payments, and on and after 19th May for the Whitsunday payments,—between 10 and 3 o'clock.

N.B.—*Bursars, Scholars, and Fellows who desire to resign should at once announce this to the Factor. They must apply to the Factor for the instalments due to them within three months after they have become payable, otherwise they will be regarded as having resigned.*

JOHN PATRICK, D.D.,  
Dean of the Faculty of Divinity.

# Faculty of Law.

Dean—Professor Sir LUDOVIC J. GRANT, Bart., B.A.

## PROGRAMME OF CLASSES.

### WINTER SESSION, 1901-1902.

*The Classes in the Faculty of Law will open as follows, and will close on Thursday, 20th March 1902.*

Classes.	Days of Opening, and Hours of Lectures.	Professors and Lecturers.	Class Fees. <sup>1</sup>
Public Law <sup>2</sup> ( <i>i.e.</i> a half-course in Jurisprudence and a half-course in Public International Law)	15 Oct., 2 o'cl.	Prof. Sir Ludovic J. Grant, Bart.	£4 4 <sup>3</sup>
Civil Law <sup>2</sup> .....	15 Oct., 4 „	Prof. Mackintosh	5 5 <sup>4</sup>
Scots Law .....	15 Oct., 9 „	Prof. Rankine .....	5 5 <sup>4</sup>
Constitutional Law and History <sup>5</sup> .....	15 Oct., 5 „	Prof. Kirkpatrick.	4 4 <sup>3</sup>
Conveyancing .....	15 Oct., 9 „	Prof. Mounsey ....	4 4
Political Economy <sup>2</sup> ...	15 Oct., 5 „	Prof. Nicholson	3 3 <sup>3</sup>
Do. (Honours) Course, <sup>2</sup> Mon., Tues., & Th...	17 Oct., 3 „		3 3 <sup>3</sup>
Procedure and Evidence <sup>6</sup> .....	15 Oct., 5.30 „	... ..	2 2

### SUMMER SESSION, 1902.

*The Classes in the Faculty of Law will open as follows, and will close on Wednesday, 16th July.*

Classes.	Days of Opening, and Hours of Lectures.	Professors and Lecturers.	Class Fees. <sup>1</sup>
Civil Law .....	13 May, 9 o'clock	Prof. Mackintosh.	£5 5 <sup>4</sup>
Scots Law .....	13 May, 9 „	Prof. Rankine .....	5 5 <sup>4</sup>
Forensic Medicine....	1 May, 2 „	{ Prof. Sir Henry D. Littlejohn.	4 4
International Private Law <sup>6</sup> .....	13 May, 5 „	{ N. J. D. Kennedy, M.A. }	2 2

<sup>1</sup> Matriculation Fees: Year, £1, 1s.; Summer, 10s. 6d. Second attendances: On £5, 5s. or £4, 4s. Courses, £3, 3s.; on £3, 3s. Courses, £2, 2s. On Half-Courses: First half, no reduction; second half, £1, 1s.; on Procedure and Evidence and International Private Law, second attendances, £1, 11s. 6d.; third or subsequent attendances on any Class, £1, 1s.

<sup>2</sup> Qualifying also for the degree of M.A.

<sup>3</sup> For a Half-Course, £2, 2s.

<sup>4</sup> This Fee is paid in Winter, and includes the Winter and Summer Sessions. Fee for Winter Session only, £4, 4s.; for Summer Session only, £2, 2s.

<sup>5</sup> Qualifies either as an optional Arts subject, or as "History" as specified in § VII., 2 (b) of the Arts Regulations.

<sup>6</sup> Five shillings University entrance fee for non-matriculated Students. Payment of this fee does not entitle the Student to a Class Certificate nor to any other University privilege.



## Courses of Lectures.

1901-1902.

### I. CIVIL LAW.

PROFESSOR MACKINTOSH, LL.D.

The full Course extends over a Winter and a Summer Session, covered by one fee of £5, 5s.

The Winter Course is the same as for Graduation in Arts ; see Courses in Arts. The Summer Session is devoted to the doctrines of (1) Wills and Succession, (2) Obligations and Contract. The Contract of Sale will be dealt with in detail.

The Lectures are equally adapted for students qualifying for the legal profession in Scotland or England, or for service in India or the Colonies.

*Text-Books.*—The Institutes of Gaius and Justinian, and the Professor's "Roman Law of Sale."

The "Muirhead Prize" and the "Forensic Prize" are offered annually for competition.

### II. SCOTS LAW.

PROFESSOR RANKINE, K.C., LL.D.

Students are recommended to make themselves familiar either with Erskine's "Principles" or his "Institutes" (edition by J. Badenach Nicolson, Esq., 1871). The nineteenth edition of the former work will be the text-book of the Class.

1. Sketch of the Literature of the Law of Scotland—the sources of the Law—the interpretation of Statutes.

2. Personal Relations—marriage and the modes of proving it—patrimonial effects of Marriage—rights of husband and wife—dissolution of Marriage—divorce—tutors and curators—minors—insane—parent and child—succession—heritable and moveable—wills—trusts.

3. Wrongs—personal injury—defamation—ownership of heritable property—rights and liabilities incident thereto—ownership of moveables—copyright—patents.

4. Obligations and Contracts—general requisites, constitution, and construction—agency—partnership—joint-stock companies—sale—letting to hire—leases—carriers—shipping—insurance—bills of exchange—extinction of obligations—diligence—bankruptcy.

5. Parochial Law—burgh and county law—rates and taxes.

6. Criminal Law.

*Summer Session.*

The Lectures on Criminal Law, and part of the lectures on the above subjects, are delivered during the Summer Session.

### III. CONVEYANCING.

PROFESSOR MOUNSEY.

PRELIMINARY.—Classification of Property and Rights.

I. HERITABLE RIGHTS.—Feudal—Allodial—Feudal System in Scotland—Historical and characteristic features—Constitution of Feudal estate—Personal right—Real right—Transmission, *inter vivos*—Voluntary—Statutory—Judicial—Inhibition—Adjudication—Sequestration—Trust for Creditors—Devolution on Death—Destinations—Services—Entails—Leases—Servitudes—Contract of sale.

II. MOVEABLE RIGHTS.—Personal obligations—Securities—Personal—Heritable—(constitution, transmission and extinction)—Contracts—Partnership—Joint Stock Companies—Indentures—Factories—Submissions—Maritime writs—Copyright—Patents.

III. TESTAMENTARY WRITS.—Testaments—Wills—*Mortis causa* Dispositions—Codicils—Bonds of Provision.

IV. CONTRACTS OF MARRIAGE.

V. AUTHENTICATION.—Stamp duties.

(Menzies' Lectures—Bell's Lectures—Erskine's Principles.)

### IV. PUBLIC LAW.

PROFESSOR SIR LUDOVIC GRANT, BART.

Two Courses will be delivered during the Session 1901-1902 : (1) Forty Lectures on General Jurisprudence (Philosophy of Law) ; and (2) Forty Lectures on Public International Law.

1. The Course on Jurisprudence will begin on Tuesday, 16th October 1901, at two o'clock.

(1) Analytical and Historical Jurisprudence.

(a) Law and Morality—The Evolution of Law—Archaic Types of Law—Modern Law—The State and Legal Sovereignty.

(b) The Sources of Law—Custom—Religion—Juridical Interpretation—Judicial Decision—Legislation.

(c) Modes in which Law expressed—Written and Unwritten.

(d) The Subject-matter of Law—Rights and Duties—Substantive Law and Adjective Law—Person—Things—Acts.

(e) The Classification of Law.

(2) Philosophical Jurisprudence—The Basis of Political Obligation—The Conception of Justice—The Source of Rights—Examination of Institutions.

*Books of Reference.*—The Student's Austin. Holland, Jurisprudence. Markby, Elements of Law. Sir Henry Maine's works. Pollock, History of Political Science, and First Book of Jurisprudence. Clark, Practical Jurisprudence. Dicey, Law of the Constitution. Jenks, Law and Politics in the Middle Ages. Green, Principles of Political Obligation. Ritchie, Natural Rights. Ahrens, Cours du Droit Naturel. Bluntschli, The Theory of the State. Lorimer, Institutes of Law.

2. The Course on Public International Law will begin on 8th January 1901.

(a) An Historical Retrospect. (b) Some Account of the Science and Literature of Public International Law.

(c) An examination of the sources and a critical exposition of the leading doctrines of Public International Law.

*Books of Reference.*—Ward, Enquiry into the Foundation and History of the Law of Nations. Wheaton, History of the Law of Nations; Introduction. Nys, Les Origines du Droit International. Walker, History of the Law of Nations. Westlake,

International Law. Phillimore, International Law, Vol. I. Bryce, Holy Roman Empire. Pardessus, Us et Coutumes de la Mer. Hall, International Law. Wheaton, International Law. Lawrence, Principles of International Law. Rivier, Principes du Droit des Gens. Hertslæt, Map of Europe by Treaty. Letters by Historicus. Pitt Cobbett, Select Cases. Holland Studies in International Law.

## V. CONSTITUTIONAL LAW AND HISTORY.

PROFESSOR KIRKPATRICK, LL.D.

A full Winter Course, qualifying for Graduation in Law and in Arts [either as an optional Arts subject, or as "History," as required by section VII., 2 (*b*) of the Arts Regulations], Tuesdays, Wednesdays, Thursdays, and Fridays, at 5. Eight examinations and two essays during the Session. Honours for examinations and essays combined.

*Subjects*:—(1st Half) Constitutional History and Law of England; (2nd Half) Constitutional History of America, France, Germany, Austria, Hungary, Switzerland, &c.

*Text-Books*.—(1) Elementary: Taswell Langmead's Constitutional History, and S. R. Gardiner's Student's History of England. For further study, Stubbs's Select Charters and English Constitutional History; Hallam's Middle Ages, Chap. viii.; Hallam's Constitutional History of England; Sir T. E. May's Constitutional History; English Constitution by W. Bagehot; Guizot's Lectures on Representative Government; R. Gneist's Self-Government in England, 3d edition, Berlin, 1871; Gneist's Geschichte und heutige Gestalt der Aemter, etc., in England, 2d edition, Berlin, 1866; Gneist's English Constitution, translated by P. A. Ashworth, London, 1886; Blackstone's Commentaries, Book IV., of Public Rights; Dicey's Law of the Constitution.

(2) Elementary: Thwaites' The Colonies, and Hart's Formation of the Union (Epochs of American History), Johnston's History of the United States, Macy's Our Government. For

further study, Bryce's American Commonwealth, Bancroft's History of the Constitution of the U.S.A., Winsor's History of the U.S.A., Adams and Cunningham's Swiss Confederation, Dareste's or Demombynes' Constitutions, Boutmy's Studies in Constitutional Law, Borgeaud's Adoption and Amendment of Constitutions, A. Lawrence Lowell on Governments and Parties in Europe, &c.

The History Reading-Room (adjoining the Lecture Room) is open to members of the Class during six hours weekly, the hours being announced at the beginning of each Winter Session.

The Mackay Lectures by Mr D. P. Heatley, University Lecturer and Assistant in History, are free to members of the Class.

## VI. FORENSIC MEDICINE.

PROFESSOR SIR HENRY D. LITTLEJOHN, M.D., LL.D.

For Synopsis of this Course, *see* under Faculty of Medicine.

## VII. COMMERCIAL AND POLITICAL ECONOMY AND MERCANTILE LAW.

For Synopsis of this Course, *see* under Faculty of Arts.

## VIII. INTERNATIONAL PRIVATE LAW.

*Lecturer*—N. J. D. KENNEDY, M.A.

A Course of Forty Lectures on this subject will be given during the Summer Session on Tuesday, Wednesday, Thursday, and Friday in each week, at 5 P.M. Under Ordinances 39 and 40 attendance on these Lectures qualifies as a half-course for Graduation in Law. The subject is also included among those in which Intrants to the Faculty of Advocates may be examined, and the Lectures are therefore adapted for students qualifying for the Scottish Bar.

The Lectures will deal with (a) The nature and scope of International Private Law; (b) Its History and Literature;

(c) Its general principles and their application in regard to—  
 i. *Forum*, or Competency, including Jurisdiction, the Recognition of Foreign Judgments, and Procedure generally; and  
 ii. *Lex*, or Choice of Law, in questions of (1) the Personal Law, including *status*, and the family relations; (2) the Law of Property, moveable and immoveable; (3) the Law of Obligations, including contract and delict; (4) Succession; and (5) Bankruptcy.

Examinations will be held on the subjects of the Lectures.

Students are recommended to attend the Class of Scots Law before attending this Course.

*Books of Reference.*—Guthrie's Savigny; Westlake's Private International Law; Gillespie's Bar; Foote on Private International Jurisprudence; and Dicey's Digest of the Law of England with reference to the Conflict of Laws.

## PROCEDURE AND EVIDENCE.

### *Lecturer—*

This Course of Forty Lectures will describe the various Courts of Scotland, with the nature of their jurisdiction, the actions competent in each, and the details of the procedure followed in them. It will also include the principles of the Law of Evidence. The Lectures are delivered on Tuesday and Thursday of each week during the Winter Session.

*Text-Books.*—Mackay's "Manual" and "Practice of the Court of Session"; Coldstream's "Procedure in the Court of Session"; Dove Wilson's "Sheriff-Court Practice in Civil Causes"; Macdonald's "Criminal Law"; Macdonald's "Criminal Procedure (Scotland) Act, 1887"; Dickson on "Evidence"; Kirkpatrick on "Evidence."

Candidates for Graduation who pass in Procedure and Evidence as an extra subject may have this fact recorded on their Diplomas.

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## Regulations for Graduation in Law.

*For Regulations for those who began the Study of Law, with a view to Graduation, before 1st October 1895, see CALENDAR for 1896-97 or previous CALENDARS.*

Two Degrees in Law are conferred on Examination, viz., Bachelor of Law (B.L.) and Bachelor of Laws (LL.B.). Either Degree admits to the profession of Law Agent, provided the Candidate has included Scots Law and Conveyancing among his Graduation subjects, and has passed an Examination in the Practice of the Courts under the Law Agents Act.

The Degree of LL.B. (if the Candidate has been examined in Civil Law, Philosophy of Law, International Law—Public or Private—Constitutional Law and History, Medical Jurisprudence, Scots Law—Civil and Criminal, including Procedure—and Conveyancing admits to the profession of Advocate.

Two Law Graduation Examinations are held annually, the first beginning on the last Monday in October, and the second on the third Monday in March.

### I. BACHELOR OF LAWS (LL.B.).

I. No one is admitted to examination as a Candidate for the Degree of Bachelor of Laws (LL.B.) unless he be a Graduate in Arts of one of the Universities of the United Kingdom; or of any Foreign or Colonial University specially recognised for the purpose by the University Court.<sup>1</sup>

II. The course of study in Law for the Degree of Bachelor of Laws includes the following subjects:—<sup>2</sup>

- (1) Jurisprudence, General or Comparative, during a course of not less than forty lectures.
- (2) The Law of Nations, or Public International Law, during a course of not less than forty lectures.
- (3) Civil Law, during a course of not less than eighty lectures.
- (4) Law of Scotland, or Law of England, during a course of not less than eighty lectures.
- (5) Constitutional Law and History, during a course of not less than eighty lectures.
- (6) Conveyancing, during a course of not less than eighty lectures; or Political Economy, or Mercantile Law, during a course of not less than eighty lectures.

<sup>1</sup> The following Degrees have been recognised in terms of this Section: B.A. of New Zealand University; B.A. of Cape of Good Hope University; B.A. of Dalhousie University, Halifax, Nova Scotia; Queen's College, Kingston, Canada; B.A. of the Universities of Calcutta, Madras, Harvard, and Michigan.

<sup>2</sup> For names of authorised extra-academical lecturers, see under Faculty of Medicine.

- (7) Any two of the following subjects, namely :—International Private Law, Political Economy, Administrative Law, and Forensic Medicine ; in each case during a course of not less than forty lectures.

III. (1) The course of study necessary for the Degree of Bachelor of Laws extends over three academical years, one of which at least must be spent in the University in which the Candidate intends to graduate, the other two may be spent in any other University or School of Law, specially recognised by the University Court.<sup>1</sup>

(2) No Candidate for a Degree is deemed to have attended a class as part of the course of study necessary for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

IV. Candidates must undergo examination in the subjects prescribed in Section II. hereof ; and they must pass at one examination in at least two of these subjects. Before presenting themselves in any subject the Candidates must have attended the requisite course of instruction in such subject. Candidates who have passed an examination for another degree in any of the said prescribed subjects in the same University may be exempted from examination in such subject or subjects, provided that the examiners are satisfied that the previous examination in such subject or subjects has been passed on a sufficiently high standard.

V. Every Candidate for the Degree of Bachelor of Laws is examined both orally and in writing on each of the subjects in the course of study above prescribed, in which he presents himself for examination.

VI. (1) Distinction may be awarded to Candidates who have displayed exceptional merit in their examinations.

(2) For the Degree of Bachelor of Laws a diploma is given, setting forth the subjects in which the Candidate has passed, and the distinction (if any) he has attained.

Candidates for Examination or Graduation must matriculate for the year.

## II. BACHELOR OF LAW (B.L.).

I. No one is admitted to examination as a Candidate for the Degree of Bachelor of Law (B.L.) unless he be a Graduate in Arts of one of the Universities of the United Kingdom, or of any Foreign or Colonial University specially recognised for the purpose by the University Court ;<sup>2</sup> or until he has passed—*A.* The Preliminary Examination in the Faculty of Arts, or its equivalent, and *B.* An examination in one of the Scottish Universities, to be conducted by the Examiners in Arts, in the following subjects, on the Standard of Examination for the Ordinary Degree of Master of Arts :—

<sup>1</sup> Recognised in terms of this section : the Universities of Oxford, Cambridge, and Dublin ; the Inner and Middle Temples ; Lincoln's Inn ; and Gray's Inn ; the Madras Law School ; College of Law, University, Minnesota.

<sup>2</sup> See Footnote 1, page 325.

(1) Logic and Psychology ; or, in the option of the Candidate, Moral Philosophy. (2) Latin. (3) One additional Arts subject, not being one of those which belong also to the Faculty of Law.

And he must have studied at least one of these subjects in a full course in a Scottish University, or an equivalent course in another University approved by the University Court.

II. The course of study in Law necessary for the Degree of Bachelor of Law must include the following subjects:—

(1) Civil Law, during a course of not less than eighty lectures ; or a half-course in Civil Law where in any University a full course is not available ; provided that in the latter case, Candidates who are not already graduates in Arts are required to take in addition a course in such subject in Arts as may be sanctioned by the *Senatus Academicus*, or a half-course in one or other of the following branches of Law :—(a) Jurisprudence, General or Comparative. (b) The Law of Nations, or Public International Law. (c) Constitutional Law and History. (d) International Private Law. (e) Mercantile Law. (f) Administrative Law.

(2) Law of Scotland, during a course of not less than eighty lectures.

(3) Conveyancing, during a course of not less than eighty lectures.

(4) Forensic Medicine, during a course of not less than forty meetings of the class ; or, in the option of the Candidate, a half-course in one of the branches of Law specified in sub-section 1 of this section, if not already taken.

III. (1) The course of study in Law necessary for the Degree of Bachelor of Law extends over two Academical years.

(2) No Candidate for a Degree is deemed to have attended a class as part of the course of study necessary for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

(3) The Candidate may prosecute his studies during the prescribed two years in one Scottish University, or in different Scottish Universities, or in a Scottish University and a University or School of Law specially recognised by the University Court ; but one at least of these years must be spent, and all the examinations in the subjects mentioned in the preceding section must be passed, at the University in which he intends to graduate.

IV. The Candidate for the Degree of Bachelor of Law must undergo examination and pass in the four or more subjects selected by him ; but he may present himself for examination in one subject or group of subjects at a time, provided that he has completed the course of study for such subject or group of subjects, and provided also that in that case a higher standard of proficiency shall be exacted.

V. Every Candidate for the Degree of Bachelor of Law is examined, both orally and in writing, on each of the subjects in the course of study above prescribed, in which he presents himself for examination.

VI. (1) Distinction may be awarded to Candidates who have displayed exceptional merit in their examinations.

(2) For the Degree of Bachelor of Law a diploma is given, setting forth the subjects in which the Candidate has passed, and the distinction (if any) he has attained.

Candidates for Examination or Graduation must matriculate for the year.

## EXAMINATIONS.

### I. PRELIMINARY EXAMINATIONS FOR BACHELOR OF LAW (B.L.).

*For outlines of the subjects of the Preliminary Examination (a) on the Standard of the Preliminary Examination for the Degree of Master of Arts (M.A.), and (b) on the Standard of the Ordinary Degree of M.A., see Regulations for Degrees in Arts, where the dates of entering for the Examinations and payment of the Fees, and the dates of the Examinations, are given.*

### II. LAW EXAMINATIONS (FOR DEGREES OF LL.B. AND B.L.).

*Subjects for October 1901 (and till further notice).<sup>1</sup>*

In GENERAL JURISPRUDENCE the subjects will be *The Philosophy of Law and Civil Society*, and *Analytical and Historical Jurisprudence*. For books recommended see Synopsis of the Professor's Lectures.

In PUBLIC INTERNATIONAL LAW the examination will be in the doctrines of the Law and the historical and scientific questions connected therewith. For books see Synopsis of the Professor's Lectures.

In CIVIL LAW the examination will be on the History of the Law, and on its Principles as explained in the Institutes of Gaius and Justinian. Candidates for LL.B. will also be examined on Books xviii., tit. i. (*De contrahenda emptione*) and xix., tit. i. (*de actionibus empti venditi*) of the Digest. The paper will contain passages for translation into English from the Latin text of the above-mentioned books.

In CONSTITUTIONAL LAW AND HISTORY — (a) Constitutional History and Law of England, down to the first Reform Act (Text-books, the works of Stubbs, Hallam, and May); (b) Constitutional History of the U.S. of America, of France, Germany, Switzerland, Hungary, etc. (Text-books, Bancroft, Bryce, Adams and Cunningham, Dareste's or Demombynes' Constitutions). See also Synopsis of Lectures.

In the LAW OF SCOTLAND the subject will be the Municipal Law, Civil and Criminal. The works of Mr Erskine, Mr G. J. Bell, and Lord Kingsburgh, in the latest editions, are recommended to Candidates.

In CONVEYANCING the subject of examination will be—Heritable Rights and Moveable Rights.

In FORENSIC MEDICINE—The subjects of the Course, with the exception of Toxicology.

In POLITICAL ECONOMY Candidates are recommended to read in

<sup>1</sup> Examination papers will be set in the other subjects prescribed by the Regulations if required.

addition to the books set for the M.A. examination, the Professor's "Principles of Political Economy," Books I.-III.

IN INTERNATIONAL PRIVATE LAW Candidates will be examined on the subjects dealt with in the Lectures. See Synopsis of Lectures, and in Guthrie's Savigny.

PROCEDURE AND EVIDENCE.—Candidates for a Law Degree may be examined in this subject also, and have the fact recorded on their diplomas. Candidates will be examined on the subjects dealt with in the Lectures. Text-books, see Synopsis of Lectures.

### FEES.

#### I. PRELIMINARY EXAMINATION FOR B.L.

1. For each examination on Standard of M.A. Preliminary Examination, . . . . . £0 10 6
2. For each subject on M.A. Standard the same fee as is payable for the corresponding subject for M.A., viz. 15s., or £1, 1s., as the case may be.

#### II. LAW EXAMINATIONS FOR LL.B. AND B.L.

The fee payable for LL.B. is . . . . . £6 6 0  
or

If the Examination be taken at two or more periods—

For the First, . . . . . £3 3 0

For the Second, . . . . . 3 3 0

The fee payable for B.L. is . . . . . £5 5 0  
or

If the Examination be taken at two or more periods—

For the First, . . . . . £3 3 0

For the Second, . . . . . 2 2 0

Candidates for LL.B. or B.L. subjects pay a fee of 10s. 6d. for re-appearance for Examination in each subject.

Candidates for Examination or for Graduation must be Matriculated Students of the Academic year.

Fee for registration as a member of the General Council (if not already registered) £1.

#### DATES OF LAW EXAMINATIONS, AND FOR GIVING IN NAMES AND PAYMENT OF FEES.<sup>1</sup>

Candidates may pay the fees personally or transmit them to T. GILBERT, University, Edinburgh, by *Post Office* or *Postal Orders*,

<sup>1</sup> When names are not entered, nor fees paid, on or before the stated dates, or a Pass obtained where the fee has been previously paid, a late-entry fee of ten shillings must be paid before the Candidate can be admitted to examination. This fee will not be received after Twelve o'clock of the last day but one preceding the Examination for which the Candidate desires to appear, without the express permission of the Dean of his Faculty and the subsequent sanction of the Senatus. A Candidate must enter his name and pay the Fee, or, when the fee has been previously paid, obtain a Pass, for each periodical Examination at which he desires to appear. A Candidate is not held to be entered until his Schedule is lodged, the Fee paid, and a Pass to the Examination obtained.



or by *Bank Drafts*, crossed Union Bank of Scotland (High Street Branch), Edinburgh, but not by cheques on private accounts.

1901.

October 21, Mon. Names to be given in, certificates shown, and fees paid, *on or before* this date.

„ 28, Mon. Scots Law, 9-1; Constitutional Law and History, 2-4.

„ 29, Tu. Civil Law, 9-1; Constitutional Law and History, 2-4.

„ 30, Wed. Conveyancing, 9-1; Forensic Medicine, 2-4.

„ 31, Th. General Jurisprudence, 9-11; Public International Law, 11.30-1.30; Political Economy, 2-4.

Nov. 1, Fri. Political Economy, 9-11; International Private Law, 12-2; Procedure and Evidence, 2.30-4.30.

„ 4, Mon. Oral Examinations begin.

1902.

March 3, Mon. Names to be given in, certificates shown, and fees paid, *on or before* this date.

„ 17, Mon. Scots Law, 9-1; Constitutional Law and History, 2-4.

„ 18, Tu. Civil Law, 9-1; Constitutional Law and History, 2-4.

„ 19, Wed. Conveyancing, 9-1; Forensic Medicine, 2-4.

„ 20, Th. General Jurisprudence, 9-11; Public International Law, 11.30-1.30; Political Economy, 5-7.

„ 21, Fri. Political Economy, 5-7; International Private Law, 9-11; Procedure and Evidence, 12-2.

„ 24, Mon. Oral Examinations begin.

#### GRADUATION CEREMONIALS.

April 11, Fri.	}	Names to be entered at least ten days previously.
July 26, Sat.		

## Graduates in Law.<sup>1</sup>

### DEGREE OF LL.B., 1889-1901.

1889.

David Anderson, M.A.

Claud Patrick Boswell, M.A.

Archibald Brown Campbell, M.A.

\*Andrew Henderson Briggs Constable, M.A.

\*Alistair Davidson, M.A.

\*Matthew Robin Greenlees, M.A.

James Arthur Hope, M.A.

\*William Hunter, M.A.

\*Robert Bird Kerr, M.A.

Francis Kinloch, B.A.

\*George Fleming Mathers, M.A.

\*John Hepburn Millar, M.A.

\*Charles David Murray, M.A.

\*Coventry Dick Peddie, M.A.

John Ritchie, M.A.

\*Hamish Hay Stuart, M.A.

Arthur Moodie Thomas, M.A.

\*Alexander Thomson, M.A.

<sup>1</sup> The names of all the Graduates in Law from the institution of the Degrees to 1888 will be found in the List of Graduates of the University, published in 1889, pp. 125-127. See also previous CALENDARS.

\* Passed with distinction.



1890.

- \*Duncan Mearns Abel, M.A.
- \*James Robertson Christie, M.A.,  
LL.B. (Glasg.).
- \*William Scott Currie, M.A.
- Edmund John Gunn, M.A.
- Neil James Kennedy, B.A.
- William James Kippen, B.A.
- Lawrence M'Laren, M.A.
- John Liddell Officer, M.A.
- Alexander David Russell, M.A.
- \*William Thomson, M.A.

1891.

- Andrew Brown, M.A.
- Charles Walker Bruce, M.A.
- Robt. Jeffrey Cunningham, M.A.
- James Wright Forbes, M.A.
- Henry William Gibson, M.A.
- Alexander Gray, M.A.
- William Gray, M.A.
- \*James Mercer Irvine, M.A., B.Sc.
- \*Erskine Dawson Jamieson, M.A.
- \*Thomas Johnston, M.A.
- Robt. Carmichael Malcolm, M.A.
- \*Thomas Brash Morison, M.A.
- C. Morrison, M.A.
- \*Andrew Fleming Smith, M.A.
- James Robert Earl Monteith  
Smith, M.A.
- Michael Smith, M.A.
- \*Robert Macaulay Smith, M.A.
- Frederick Mills Spankie, M.A.
- Alex. Arthur Granger-Stewart,  
M.A.
- \*Robert Moir Williamson, M.A.
- John Buchanan Young, M.A.

1892.

- James Barty, M.A.
- William Brown, M.A.
- \*John Sproat Taylor Cameron,  
M.A.
- \*William Chree, M.A.

John Marr Davidson, M.A.

- \*James Grant, M.A.
- Augustus Wallace M'Gregor,  
M.A.
- Thomas John Millar, M.A.
- Alexander John Raeburn, M.A.

1893.

- George Haskell Boyd, M.A.
- Thomas Sanderson Hepburn  
Burns, M.A.
- \*William Findlay, M.A.
- Louis Carr Hallard, M.A.
- \*William Ingram, M.A., D.Sc.
- \*Robert Munro, M.A.
- William Dormond Munro, M.A.
- \*Alexander Blairford Smith, M.A.
- Thomas Callander Wade, M.A.
- John Peregrine Robertson White,  
M.A.

1894.

- \*Alexander Brown, M.A.
- Robert Smith Craig, M.A.
- William Graham, M.A.
- Ian MacIntyre, M.A.
- \*James M'Robie, M.A.
- David Maxwell, M.A.
- George Morton, M.A.
- John Purves Smith, M.A.
- Frederick James Thomson, M.A.
- \*John Aitken Welsh, M.A.

1895.

- \*Francis Molison Anderson, M.A.
- \*James Ballantyne, M.A.
- John Erskine Dods, M.A.
- Alexander James Louttit Laing,  
M.A.
- \*Charles Lippe, M.A.
- Alexander M'Callum, M.A.
- William Dunbar MacDougall,  
M.A.
- William George Manson, M.A.
- \*John Arthur Thomas Robertson,  
M.A.

\* Passed with Distinction.

Walter James Robertson, M.A.  
James Rose, M.A.  
\*James Miller Thomson, M.A.  
David Milne Watson, M.A.

1896.

\*James Adamson, M.A.  
Arthur James Alison, M.A.  
William Blair, M.A.  
\*John Aitken Christie, M.A.  
James Dunlop, M.A.  
\*Hugh Archibald Hamilton, M.A.  
Robert Macfie, M.A.  
Robert Dundonald Melville, M.A.  
James Duncan Millar, M.A.  
William Mitchell, M.A.

1897.

\*Alexander Boyd Barty, M.A.  
\*John Cowan, M.A.  
\*Thomas Crow Darling, M.A.  
Maxwell Fleming, M.A.  
Robert Candlish Henderson,  
M.A.  
\*David Nasmyth Clarke Hogg,  
M.A.  
Robert Macgregor Mitchell, M.A.  
John Alexander Robson, M.A.  
George Crurie Steuart, M.A.

1898.

Bijay Kisor Acharyya, B.A.  
\*William Burt, M.A.  
\*Robert Gray, M.A.  
Thomas Hart, M.A.  
\*John Alexander Inglis, B.A.  
Henry Lillie, M.A.

1889.

\*Robert Liddell Cockburn.  
John Glover.  
William Stowell Haldane.  
John Lumsden Macpherson,  
M.A.  
John James Waugh.

\* Passed with Distinction.

Malcolm Nicolson MacInnes,  
M.A.

John Mackintosh, M.A.  
Dugald Maclean, M.A.  
John James Maclean, M.A.  
William Ogilvy, M.A.

\*Subharama Swaminadhan, M.A.

1899.

\*William Keith Aikman, M.A.  
\*James Bell Ballingall, M.A.  
\*David Connel, M.A.  
\*Edward Francis Gibson, M.A.  
George Hart, M.A.  
Charles Angus Macpherson,  
M.A.  
\*David Anderson Miln, M.A.  
\*David Robertson, M.A.

1900.

\*William Darling, M.A.  
\*John Hossell Henderson, M.A.  
James Mitchell, M.A.  
William Harper Sellar, M.A.  
John Smart, M.A.  
Alexander Steedman, M.A.  
\*Alfred Patrick MacThomas  
Thoms, M.A.

12th April 1901.

Samuel Kerr Gifford Kerr,  
M.A.  
William M'Clymont, M.A.  
John Selby Mackay, M.A.  
\*Francis Robert Sanderson, B.A.

#### DEGREE OF B.L.

1890.

Duncan Cameron.  
Duncan Archibald Maccoll.  
Robert Watson.

1891.

John Scrymgeour Hepburn.  
John Nisbet.

William Alexander Stewart.  
Thomas Trotter.  
1893.  
John Romanes.  
Thomas Edward Taylor, M.A.  
1894.  
\*Alexander Douglas Donald.  
Buckham William Liddell.  
1895.  
Geo. Ernest Rawson Coldstream.  
William Alexander Cullen.  
1896.  
James Dan Easson.  
\*Alexander Speeden Riach.  
David Ritchie.  
\*William Gowan Dobie Simpson.

1897.  
Alexander Ernest Philip Gardner.  
1898.  
James Kidd.  
John William Dods Kirkland.  
Alexander Malcolm MacEwen.  
And. Macgregor Meldrum, M.A.  
William David Mitchell.  
1899.  
Robert Letalle Proudfoot.  
\*James Scrimgeour.  
John Swan Mercer.  
12th April 1901.  
Thomas Carmichael Lowe.  
William Robertson.

### DEGREE OF DOCTOR OF LAWS (LL.D.).†

The Degree of Doctor of Laws is conferred *honoris causâ tantum*. It was first granted in 1695. Previously to 1751 it had been conferred on seven persons only. Since then more than 400 names, including some of the most distinguished in Europe, have been added to the list. The degree is not conferred in absence except in very special cases.

The following is a list of those upon whom the Degree of Doctor of Laws has been conferred 1889-1901 :—‡

1889.  
<sup>1</sup> Sir Syed Ahmed Khan, Bahadûr,  
K.C.S.I.  
J. E. T. Aitchison, C.I.E., M.D.,  
F.R.S., &c.  
<sup>1 2</sup> James D. Dana.  
<sup>1</sup> Francis Day, C.I.E., &c.  
<sup>1</sup> Hon. David Dudley Field.  
<sup>1 2</sup> C. Gegenbaur.

<sup>1 2</sup> E. Haeckel.  
<sup>1</sup> Rudolf von Jhering, Dr. Jur.  
<sup>1 2</sup> E. E. Kummer.  
William Mackintosh, M.A., Q.C.  
<sup>1 2</sup> Konrad Maurer.  
Maurice Paterson, B.A.  
Richard Quain, M.D., F.R.S.,  
&c.  
<sup>1</sup> Rudolf von Roth, Ph.D.

\* Passed with Distinction.

† Those to whom the Degree has been offered, if unable to be present at the Graduation Ceremonial immediately ensuing, may present themselves at any subsequent Ceremonial, on giving at least a week's notice.

‡ The names of those who received the Degree prior to 1859 will be found in the "Catalogue of the Graduates in the Faculties of Arts, Divinity, and Law of the University of Edinburgh since its foundation," published in 1858, and of those who received the Degree from 1859 to 1888, both years included, in the List of Graduates published in 1889, and in previous CALENDARS.

<sup>1</sup> Conferred *in absentia*.

<sup>2</sup> Tercentenary Graduates unable to be present in 1884.

- <sup>12</sup> Barthélemy St. Hilaire.  
<sup>12</sup> Jules Simon.  
 Whitley Stokes, C.S.I., C.I.E.,  
 D.C.L., &c.  
<sup>12</sup> Geheimrath Heinrich von Sybel.  
 James Ward, M.A., D.Sc.  
<sup>1</sup> William Dwight Whitney.  
<sup>12</sup> B. Windscheid.

## 1890.

- Sir Benjamin Baker, C.E.  
 Pierre Paul Leroy-Beaulieu.  
 Right Hon. Henry Chaplin, M.P.  
 Sir Dyce Duckworth, M.D.  
 Sir John Fowler, Bart., C.E.  
<sup>1</sup> James Anthony Froude, M.A.,  
 LL.D.  
 Joseph H. Gilbert, M.A., Ph.D.,  
 LL.D., F.R.S.  
 William W. Goodwin, D.C.L.  
 James Hardy.  
 Sir John Kirk, M.D., G.C.M.G.  
 General Robert Maclagan, R.E.  
 John Marshall, M.A.  
 Right Hon. J. P. B. Robertson,  
 M.P.  
 Frederic Seebohm, F.S.A.  
 Emeritus-Professor C. Piazza  
 Smyth, F.R.A.S., &c.  
 H. M. Stanley.  
 Spencer Walpole.

## 1891.

- Alexander Asher, Q.C., M.P., &c.  
 John Beddoe, M.D., F.R.S., &c.,  
 &c.  
 Major C. R. Conder, R.E.,  
 D.C.L.  
 Felix Dahn.  
 Alexander Campbell Fraser,  
 D.C.L., LL.D.  
 Cunningham Geikie, D.D.  
 George Joachim Goschen, M.P.  
 Sir George Murray Humphry,  
 M.D., F.R.S.

- Colonel Sir Colin Campbell Scott  
 Moncrieff, K.C.M.G., C.S.I.  
 Professor Simon Newcomb.  
 Sir Herbert Stanley Oakeley,  
 M.A., Mus. Doc., LL.D.,  
 D.C.L.  
 John Johnstone Rogerson, B.A.,  
 LL.B.

## 1892.

- Surgeon-General James Macnabb  
 Cuninghame, M.D., &c.  
<sup>1</sup> Rev. C. V. A. Van Dyck, M.D.,  
 D.D.  
 Robert M. Ferguson, Ph.D.,  
 F.R.S.E.  
 Rt. Hon. Sir Edward Fry.  
<sup>1</sup> Theodore Nöeldeke.  
 Dr Jakob Schipper.  
 Hon. Sir Charles Tupper, Bart.,  
 G.C.M.G., C.B., M.D.  
<sup>1</sup> Rev. Thomas Walker, M.A.  
 Robert Boog Watson, B.A.,  
 F.R.S.E.

## 1893.

- Geheimrath Professor Dr Arthur  
 Auwers.  
 Sir I. Lowthian Bell, Bart.,  
 F.R.S.  
 John Sutherland Black, M.A.  
 Sir George Buchanan, M.D.,  
 F.R.S.  
 Rt. Hon. Sir Stuart Knill, Bart.  
 Henry Duncan Littlejohn, M.D.,  
 F.R.C.S. Edin.  
 Alfred Marshall, M.A.  
 John Rhys, M.A.  
 His Excellency General the Right  
 Hon. Lord Roberts, of Can-  
 dahar, G.C.B., G.C.I.E.,  
 V.C., R.A. (B.).  
 Lieut.-Colonel Justin C. Ross,  
 C.M.G.  
 Rev. Walter C. Smith, D.D.

<sup>1</sup> Conferred *in absentia*.

<sup>2</sup> Tercentenary Graduates unable to be present in 1884.

Alexander Moody Stuart.  
Ramsay Heatley Traquair, M.D.,  
F.R.S.

1894.

John Taylor Brown.  
W. H. Gaskell, M.D., F.R.S.  
Henry Goudy, M.A., LL.B.  
Professor Franz Kielhorn, Ph.D.  
Professor Diodato Lioy.  
Charles B. Logan, W.S.  
David Patrick, M.A., B.D.  
Rt. Hon. Sir Charles John Pearson, M.A., Q.C., M.P.  
James Alexander Russell, M.A.,  
B.Sc., M.B., C.M.  
George Wilson, M.A., M.D.

1895.

Rev. William Cunningham, M.A.,  
D.Sc., D.D.  
Hon. Lord M. T. Stormonth  
Darling, M.A.  
Thos. Edmonson Charles, M.D.  
Joseph Remi-Leopold Delbœuf,  
Ph.D., D.Litt., D.Sc.  
S. Weir Mitchell, M.D.  
Professor W. M. Flinders Petrie,  
M.A., D.C.L.

1896.

Sir Dietrich Brandis, Ph.D.,  
K.C.I.E., F.R.S.  
P. Hume Brown, M.A.  
Giosuè Carducci.  
Sir Charles A. Elliott, K.C.S.I.  
Emeritus-Prof. David Masson,  
LL.D.  
Sir J. Russell Reynolds, Bart.,  
M.D., &c.  
Douglas Argyll Robertson, M.D.  
John Alexander Stewart, M.A.  
David Duncan, M.A., D.Sc.  
Professor Francis A. Walker,  
LL.D.

1897.

Professor James Dewar, M.A.,  
F.R.S.  
James Gairdner.  
William M'Ewan.  
Emeritus-Professor Sir Douglas  
Maclagan, M.D., &c.  
John Rae, M.A.  
The Rt. Hon. Lord Russell.  
John Turnbull Smith.  
John Wyllie, M.D.

1898.

Henry Pickering Bowditch,  
M.D.  
Sir William Broadbent, Bart.,  
M.D., F.R.S.  
Horace T. Brown.  
Thomas Lauder Brunton, M.D.,  
D.Sc., F.R.S.  
John B. Bury, M.A.  
J. Victor Carus.  
William J. Courthope, C.B.,  
M.A., D.Litt.  
David Ferrier, M.D., LL.D.,  
F.R.S.  
Joseph Forster, M.D.  
M. le Comte de Franqueville.  
Carl Gerhardt, M.D.  
Richard Burdon Haldane, Q.C.,  
M.P.  
Jonathan Hutchinson, M.D.,  
LL.D., F.R.S.  
Lord Kitchener of Khartoum.  
Theodor Kocher, M.D.  
Thomas G. Law.  
John W. M'Crindle, M.A.  
August Martin, M.D.  
Johann Miculicz, M.D.  
Ottavio Morisani, M.D.  
William Osler, M.D., LL.D.  
Hon. Sir Walter Phillimore,  
Bart., D.C.L.  
William Playfair, M.D., LL.D.  
D. G. Ritchie, M.A.  
Thomas George Roddick, M.D.  
Siegmond Rosenstein, M.D.

Herman Snellen, M.D.  
Sir Richard Thorne Thorne,  
K.C.B., F.R.S.

1899.

Sir William Anson, Bart., M.P.,  
D.C.L.

Lord Balfour of Burleigh.  
William Mitchell Banks, M.D.,  
F.R.C.S.

Andrew C. Bradley, M.A.  
Archibald H. Charteris, D.D.  
Marquess of Dufferin and Ava,  
K.C.B., G.C.B., G.C.M.G.,  
G.C.S.I., G.C.I.E., D.C.L.

<sup>1</sup> Caleb Frank Gates, D.D.

<sup>1</sup> Khan Bahadur Shams-ul-Ulama  
Moulavee Saiyid Muhammad  
Zia-ood-Deen Khan, Raees of  
Delhi.

David F. Lowe, M.A.  
George Walter Prothero, M.A.,  
D.Litt.

Andrew G. Wauchope, C.B.,  
C.M.G.

Viscount Wolseley, K.C.B.,  
G.C.B., G.C.M.G., K.C.M.G.,  
D.C.L.

1900.

Horatio Robert Forbes Brown,  
J.P.

His Excellency the Hon. Joseph  
Hodges Choate.

Miss Eleanor A. Ormerod, F.R.  
Met. Soc., F.E.S.

Charles D. F. Phillips, M.D.  
The Rev. Thomas Smith, D.D.

William Ritchie Sorley, M.A.  
<sup>1</sup> Thomas Anderson Stuart, M.D.

28th July 1900.

John Philp Wood, W.S., Professor of Conveyancing, University of  
Edinburgh.

24th November.

<sup>1</sup> Professor Cornelis Petrus Tiele, Theol.D., Litt.D., LL.D., Professor  
of the History and Philosophy of Religion in the University of  
Leiden.

12th April 1901.

The Right Hon. Sir Robert Bannatyne Finlay, K.C., LL.D.,  
Attorney-General for England.

The Rev. William Augustus Heard, M.A., Headmaster of Fettes  
College.

James Little, M.D., M.R.I.A., Regius Professor of Physic, University  
of Dublin.

James Moir, Professor of Conveyancing, University of Glasgow.

Sir John Williams, Bart., M.D., F.R.C.P., London.

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<sup>1</sup> Conferred *in absentia*.



## Bursaries, Scholarships and Prizes, &c., in the Faculty of Law.

### I.—BURSARIES.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patron.
I.	1873	The Grierson Trustees.	£80 0 0	3	1	About £26 13 4	Senatus.
II.	1873	Geo. Cairns, Solicitor.	19 0 0	1	1	About 19 0 0	Senatus.
III.	1878	Dr Andrew Thomson.	100 0 0	4	4	25 0 0	Trus. of Dr Thomson.

I. There are three Grierson Bursaries, each of the value of £26, 13s. 4d. annually. Deserving students from the parishes of Crawford or Leadhills, applying to the Clerk of Senatus on or before the 1st day of September, are entitled to preference, if they satisfy certain conditions;<sup>1</sup> and if the applicant is commencing his first Winter Session of the Law Curriculum he will be entitled to hold the Bursary for three years, provided "he prosecutes his studies with proper diligence."<sup>1</sup> The subjects of examination are Elementary Latin, English, and Arithmetic. See Outline of Subjects, pages 107 and 108, and Time-Table of Examinations, page 124.

Failing preferential candidates, the Bursaries will be tenable for one year only, and will be awarded to candidates who have attended one year in the Faculty of Arts in some University. 1. In the case of those commencing their first Winter Session in Law, the award will be to the candidate who has passed highest in Latin and Moral Philosophy at the Arts Graduation examination in October. 2. In the case of candidates commencing their second Winter Session—to the most distinguished law-student of that standing, who, if not a Graduate in Arts, has passed satisfactorily in Latin and Moral Philosophy at the Arts Examination, either in October or earlier. 3. In the case of candidates commencing the third Winter Session of the Law Curriculum—to the most distinguished law-student of that standing who has passed satisfactorily in Latin, Moral Philosophy, and Logic at the Arts Examination in October or earlier. See Regulations, CALENDAR 1877-78, p. 370. *Bursars* 1900—First year, *Alfred M. Laing*. Second year, *J. C. Fenton, M.A.* Third year, *D. N. Burden, M.A.*

II. The competition for the Cairns Bursary, which is tenable for one

<sup>1</sup> See CALENDAR 1877-78, p. 370. By "proper diligence" is understood regular attendance on Classes, and reasonable proficiency in Class Examinations.

year only, and is not subject to any preferences, is subject to the same conditions as those for the second year Grierson Bursary. This Bursary is open to Students who have completed one year in the Law Faculty. *Bursar—1900, T. J. Carlyle Gifford, M.A.*

III. Candidates must be Matriculated Students commencing their First Winter Session, and must intimate their intention to compete to Messrs Traquair, Dickson & Maclaren, W.S., 11 Hill Street, Edinburgh, and also to the Clerk of the Senatus on or before 15th September. Candidates of the name of Thomson or Traquair, or natives of the town or county of Dumfries or the city of Edinburgh, are preferred. The Examination is in Latin and Moral Philosophy, and is the same as the October Examinations in those subjects for M.A. See *CALENDAR 1879-80, p. 345. Bursar—1899, William Robertson.*

Bursaries in the Faculty of Arts, the holders of which may study in the Faculty of Law (see also under Faculty of Arts):—

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patron.
I.	1809	Dr Donald Grant, London.	£180 0 0	4	4	£45 0 0	Dr Grant's Trustees.
II.	1846	John Jamieson, Edinburgh.	About 26 0 0	1	4	About 26 0 0	Principal and Two Professors.
III.	1871	The Sibbald Bursaries.	150 0 0	5	3	30 0 0	Trustees of Dr J. R. Sibbald.
IV.	1883	Wm. Renton, Edinburgh.	20 0 0	1	1	20 0 0	Professors of Mathematics, Natural Philosophy, Chemistry, and Political Economy.
V.	1886	R. Allan, Feuar, Kelso.	About 90 0 0	3	3	About 30 0 0	Trustees of R. Allan.
VI.	1889	Daniel MacLaurin, London.	62 10 0	1	4	62 10 0	Town Council.

## II.—SCHOLARSHIPS.

Where the competition is open to Graduates, their standing will be computed from the date of the Graduation Ceremonial immediately following the completion of their Law Examinations.

Four Vans Dunlop Scholarships, each of about £100 per annum, tenable for three years, are connected with the Faculty of Law:—

Candidates are required to matriculate for the year in which the competition takes place, and must produce evidence that they are eligible.

I. *Vans Dunlop Scholarship in Commercial and Political Economy and Mercantile Law*, for which both Law and Arts Students are eligible. For Regulations, see under Scholarships in Faculty of Arts.

Next vacancy in October 1901.

II. *Vans Dunlop Scholarship in the Law of Nature and Nations, Civil Law, and Constitutional Law and History.* The Regulations for competition are as follows :—

(a) The Competition is open to all Candidates who, within the three years immediately preceding the date of competition, shall have graduated in Law in this University, or shall have passed the Graduation Examination in the three subjects of examination for the Scholarship : provided they have written papers of the LL.B. standard at the Graduation Examination, and have obtained an average of not less than 75 per cent. of marks in these subjects.

(b) The Competition is by written Essays on branches of law to be announced at least one year before the date of competition. The precise subject of each of the essays will be set on the conclusion of the Graduation Examination in October.

(c) The Examiners are the Professors of the prescribed subjects, assisted by the additional Law Examiners.

Next vacancy in October 1901.

Each holder of the Scholarship will be required to deliver, to the satisfaction of the Faculty of Law, two courses of three lectures each on one of the subjects of examination for the Scholarship, viz., one course in the second, and the other in the third year of his tenure.

1898. *J. A. Christie, LL.B.*

III. *Vans Dunlop Scholarship in Scots Law and Conveyancing.*

(a) The Competition is open to all Candidates who, within the three years immediately preceding the date of competition, have graduated in Law in this University, or have passed the Graduation Examination in Scots Law, Conveyancing, and Forensic Medicine, provided they have obtained at the Graduation Examination an average of not less than 75 per cent. of marks in these three subjects.

(b) The Competition is by written Essays on (1) The Civil Law of Scotland, (2) the Criminal Law of Scotland, and (3) Conveyancing, the particular branches of which will be announced at least one year before the competition. The precise subject of each essay will be set on the conclusion of the Graduation Examination in October.

(c) The Examiners are the Professors of the prescribed subjects, assisted by the additional Law Examiners.

Next vacancy in October 1901.

Each holder of the Scholarship will be required to deliver, to the satisfaction of the Faculty of Law, two courses of three lectures each on one of the subjects of examination for the Scholarship, viz., one course in the second, and the other in the third year of his tenure.

1900. Not awarded.

IV. *Vans Dunlop Scholarship in History.* For Regulations, see under Scholarships in Faculty of Arts. Next vacancy in October 1901.

V. *The Lorimer Travelling Scholarship.*<sup>1</sup>

The Lorimer Travelling Scholarship, of the annual value of about £44, tenable for two years, for the encouragement of the study of the "Law of Nature and Nations" in foreign Law Schools by Students and Graduates in the Faculty of Law, was founded by the Lorimer Memorial Committee and the Association for the better Endowment of the University. The Scholarship is open to Candidates who, during the two years immediately preceding that in which a scholar falls to be appointed, have completed the examinations for a Degree in Law in the University in the following subjects, namely—(1) The "Law of Nature and Nations" (including therein the Philosophy of Law); (2) The Civil Law; and (3) Either (a) Constitutional Law and History, or (b) Political Economy. The foreign Law School or Schools which the Scholar proposes to attend must be previously approved by the Faculty of Law. The Candidate who, in the opinion of the Faculty of Law, passes with most distinction in the examinations for Graduation in Law, in the subjects above set forth, during the two years immediately preceding the election, and who is willing to fulfil the conditions imposed by the Deed of Foundation, will be eligible, consideration being always given to his proficiency in the first of the above-named subjects, and to his knowledge of the modern language or languages spoken in the Law School or Schools where he proposes to study. For Deed of Foundation, see CALENDAR for 1892-93, p. 538. Next Vacancy in July 1902.

1900. *John Watson, M.A.*

VI. *Gray Scholarship for Research.*—See under Faculty of Arts.

VII. *Thow Scholarships.*

These Scholarships, three in number, of the annual value of about £25 each, were founded by the Trustees of the late Miss Christiana Thow of Craigmore, West Ferry, near Dundee, according to the desire of Miss Christiana Thow and her Sister, Miss Margaret Thow, and out of respect to the memory of their Brothers.

The following are the Rules and Regulations applicable to the said Scholarships:—(1) The Scholarships shall be distributed annually, one to the most distinguished student for the Winter Session in the Class of Scots Law at the University of Edinburgh; another to the most distinguished for the Winter Session in the Class of Conveyancing at the said University; and the third to the most distinguished student for the Winter Session in any two of the following Classes at the said University, viz.:—Public Law, Civil Law, and Constitutional Law and History. (2) Each of the Scholarships shall be tenable only for one year by the student in the subject for which it has been bestowed upon him, but the same student may competently obtain one of the Scholarships set apart for the other subjects in a succeeding session, provided he has the necessary qualification. (3) No Student can hold

<sup>1</sup> These Regulations may be altered before the date of next competition.

two of these Scholarships for the same year, although he may have satisfied the conditions in other respects. In the event of any Student being first as regards two of the Scholarships, the Faculty of Law shall determine which Scholarship shall be awarded to him, and which shall be taken by the next most distinguished student. (4) There shall be no restriction as to holding one of these Scholarships along with another Scholarship or Bursary from another source.

1901. *Andrew Meikle* (Scots Law).

*James Ireland* (Conveyancing).

*J. F. Milne,*

*W. Mitchell Thomson,* } equal.

### III.—FUNDS FOR SPECIAL STUDY OR RESEARCH.

1. *The William Dickson Travelling Fund.* See under Faculty of Arts.

2. *The Earl of Moray Bequest for the Promotion of Original Research.* See under Faculty of Arts.

### IV.—PRIZES.

I. The *Forensic Prize*, of the value of £10, founded in 1858 by the Forensic Society with the view of encouraging the study of Roman Law, is awarded annually either in July or in October, for the best Essay upon a subject prescribed by the Professor of Civil Law, or, as the result of a Special Examination, as may be found convenient. The subject of the Essay, or the date of the Examination, as the case may be, is announced by the Professor early in the session. It can be competed for only by Students of the Civil Law Class during the preceding year.

1900. *T. J. Carlyle Gifford.*

II. The *Muirhead Prize*, of about £15, 12s. 6d. annually, is awarded to the Student who gains the first place in the Class of Civil Law, as determined by the results of the periodical examinations during both the Winter and Summer Sessions.

1900. *W. H. Meikle, M.A.*

III. The *Gladstone Memorial Prize.* No 13, page 195.

SCHOLARSHIPS, BURSARIES, AND UNIVERSITY PRIZES,  
OPEN FOR COMPETITION IN THE FACULTY OF LAW DURING  
THE ACADEMIC YEAR COMMENCING 1ST OCTOBER 1901.<sup>1</sup>

#### I.—SCHOLARSHIPS.

Where the competition is open to Graduates, their standing will

<sup>1</sup> The values of the Scholarships, Bursaries, and Prizes are subject to variation consequent on the rise or fall of the rate of interest, &c. For further information and for information regarding other Scholarships, Bursaries, and Prizes, &c., see pages 337-341.



be computed from the date of the Graduation Ceremonial immediately following the completion of their Law Examinations.

The Vans Dunlop Scholarships are each of £100 per annum, and tenable for three years.

Candidates for a Vans Dunlop Scholarship must enter their names and addresses at the *Matriculation Office*, and produce evidence that they are eligible, on or before the dates specified for each Scholarship. They are required to be Matriculated students of the year in which the competition takes place.

1. *Vans Dunlop Scholarship in Commercial and Political Economy and Mercantile Law.* Names to be entered at the Matriculation Office, on or before 10th October.

The following books are recommended:—Adam Smith's *Wealth of Nations*, Book V.; Seeborn's *English Village Community*, Chaps. I.-V.; Gomme's *Village Community*; Vinogradoff's *Villeinage in England*; Cunningham's *Growth of English Industry and Commerce*, Vol. I.; Sidgwick's *Principles of Political Economy*, Book III.; Marshall's *Principles of Economics*, Vol. I.; Nicholson's *Principles of Political Economy*; Bastable's *Public Finance*; Pantaleoni's *Pure Economics*; Keynes' *Scope and Method of Political Economy*; Sidgwick's *Elements of Politics*, Chs. I.-XII.

See Regulations under Faculty of Arts.

2. *Vans Dunlop Scholarship in the Law of Nature and Nations, Civil Law, and Constitutional Law and History.* No. II. page 339.

The Competition is by written Essays.

The subjects of the Essays to be set will be taken from the following branches of Law:—

- (1) The Laws of War.
- (2) The Consensual Contracts.
- (3) Cabinet Government.

Names to be entered at the Matriculation Office, on or before 10th October.

Each holder of the Scholarship will be required to deliver, to the satisfaction of the Faculty of Law, two courses of three lectures each on one of the subjects of examination for the Scholarship, viz., one course in the second, and the other in the third year of his tenure.

3. *Vans Dunlop Scholarship in History.* See Regulations under Faculty of Arts.

The Competition will take place on the third Monday, Tuesday, and Wednesday of October 1901, beginning at 10 A.M. each day. Names to be entered *on or before* 27th September.

The Subjects of Examination are—

- (1) History of Great Britain to 1885.
- (2) Constitutional History of (a) England, 1307-1536; (b) United States, 1763-1789; (c) France, 1830-1884.
- (3) History of Scotland, 1603-1707, with special reference to the Union of 1707.



4. *Vans Dunlop Scholarship in Scots Law and Conveyancing.* No. III., page 339.

The Competition is written by Essays. The subjects of the Essays to be set for this Scholarship will be taken from the following branches of Law:—(1) The Law of Succession and Trust; The History of Criminal Procedure. (2) The Law of Heritable Securities; The Law of Entails. The precise subject of each essay will be set on the conclusion of the Graduation Examination in October 1901. Names to be entered on or before 10th October.

5. *The Lorimer Travelling Scholarship.* No. V., page 340. The Scholarship may be offered for competition in July 1902.

6. *The Gray Scholarship.* See Regulations under Faculty of Arts. The competition will be open to all who have completed the examinations for the Degree of LL.B. within the three years immediately preceding the date of the examination. The subjects of examination are: (1) General Jurisprudence, (2) the History of Roman Law, (3) (a) the Constitutional History of England generally, and (b) the Constitutional History of America from 1750-1787. Books recommended: (1) General Jurisprudence—Austin's *Lectures*; Pollock's *First Book of Jurisprudence*; Holland's *Elements of Jurisprudence*; Markby's *Elements of Law*; Jenks's *Law and Politics in the Middle Ages*; Maine's *Works*; Clark's *Practical Jurisprudence*; Dicey's *Law of the Constitution*; (2) Constitutional History (a) England, (b) America (see books named in Synopsis of the Professor's Lectures); (3) History of Roman Law. Questions may be set in Constitutional as well as in Legal History. Gaius' *Institutes* and other original sources should be studied, and the works on the subject by Mommsen, Maine, Muirhead, Ihering and Cuq may be consulted. The examinations will take place as follows:—General Jurisprudence, 2nd December, 9 A.M. to 1 P.M.; History of Roman Law, 3rd December, 9 A.M. to 1 P.M. Constitutional History, 4th December, 9 A.M. to 1 P.M. Names of Candidates to be entered on or before 18th November.

## II.—FUNDS FOR SPECIAL STUDY OR RESEARCH.

1. *The William Dickson Travelling Fund.* See under Faculty of Arts.

2. *The Earl of Moray Bequest for the Promotion of Original Research.* See under Faculty of Arts.

## III.—BURSARIES.

The subjects of examination for first-year Bursaries are Latin and Moral Philosophy, and are the same as the October Examinations in these subjects for M.A. Candidates are required to enter their names at the *Matriculation Office* on or before 1st October. Candidates for the second and third year Grierson Bursaries must apply on or before 15th October, and must state what distinctions they have attained in the Law Classes of the previous year.

- 1, 2, 3. *Three Grierson Bursaries*, No. I., page 337.
4. *The Cairns Bursary*, No. II., page 337.
5. *The Sibbald Bursary*, No. 7, page 197.
6. *A Thomson Bursary*, No. III., page 337.
7. *Renton Bursary*, No. 20, page 200.

## IV.—PRIZES.

- 1-3. *Three Thow Scholarships or Prizes*. No. VII., page 340.
4. *The Forensic Prize*. No. I., page 341.
5. *The Muirhead Prize*. No. II., page 341.
6. *The Lord Rector's Prize*. No. 1, page 195.
- 7, 8, 9. *The Trustees of Gray's Prize Essay Fund*. Nos. 7, 8, 9, page 195.
10. *The Gladstone Memorial Prize*. No. 13, page 195.

The attention of all Bursars in the Faculty of Law is particularly called to the following Regulation :—

Bursars connected with the Faculty of Law must annually attend and perform the work of at least one Class in the Faculty.

Each Scholar, Bursar, or Prizeman, when he applies to the Factor for a payment, must produce a Certificate, signed by the Dean or the Professor to whose department the Foundation is attached, attesting his regular attendance on the proper Classes, or otherwise that he has fulfilled the conditions attached to the Foundation.

Certificates, in terms of this regulation, will be given to Bursars by the *Dean of the Faculty of Law* after the 15th November; also at the end of the Session in March. In applying to the Dean for the Certificate in November, Bursars must present to him their Class Cards for the Session, as evidence that they have enrolled in their classes; and at the end of the Session they must present to him certificates from the Professors to the effect that they have attended with regularity and have performed the work of the Classes. Payments are made by the Factor for the University, Mr Henry Cook, W.S., 61 North Castle Street, Edinburgh, on and after 15th November for the Martinmas payments, and on and after 17th May for the Whitsunday payments,—between 10 and 3 o'clock.

N.B.—*Bursars and Scholars who desire to resign should at once announce this to the Factor. They must apply to the Factor for the instalments due to them within three months after they have become payable, otherwise they will be regarded as having resigned.*

L. J. GRANT, BART., B.A.,  
*Dean of the Faculty of Law.*

# Faculty of Medicine.

Dean—PROFESSOR A. R. SIMPSON, M.D.

## Programme of Classes.

### WINTER SESSION, 1901-1902.

*Students who do not intend to graduate in Medicine in this University may attend any of the Classes in the Faculty on payment of the Matriculation and Class Fees. Those who intend to graduate must pass the Preliminary Examination before attendance on any Class will qualify for Graduation. Women are now admitted to Graduation.*

*The Classes in the Faculty will be opened on Tuesday, 15th October, and will meet daily (Saturdays excepted), unless otherwise stated.*

Classes.	Days of Opening and Hours of Lectures.	Professors.	Class Fees. <sup>1</sup>
Surgery .....	15 Oct., 9 o'cl.	Prof. Chiene, C.B.	£4 4
Materia Medica .....	15 Oct., 10 ,,	Prof. Fraser.....	{ 4 4
Pract. Mat. Medica, } includ. Pharmacy }	16 Oct., 2 ,,		{ 3 3
Physiology .....	15 Oct., 2 ,,	{ Prof. Schäfer, Dr Milroy and Assistants.....	{ 4 4
Pract. Physiology:— Experimental.....	16 Oct., 10-12 ,,		{ 2 2
Chemical .....	16 Oct., 9-10 ,,		{ 1 1
Adv. Pract. Physiol. (Experi. & Chem.) <sup>5</sup>			{ 3 3
Chemistry .....	15 Oct., 10 ,,	Prof. Crum Brown	{ 4 4
Chemistry—Advanced Course .....	7 Jan., 4 ,,		{ 2 2
Practical Chemistry {	25 Nov., 11 and 2 o'cl. }		{ 3 3
Midwifery & Diseases of Women & Childr. }	15 Oct., 10 o'cl. }	Prof. Simpson ....	4 4
Advanced Botany .....	15 Oct., 11 ,,	Prof. B. Balfour..	{ 2 2 <sup>2</sup>
Prac. Bot. (Advanced)	15 Oct., 11 ,,		{ 3 3 <sup>2</sup>
Pathology .....	15 Oct., 11 ,,	Prof. Greenfield }	{ 4 4
Practical Pathology...	16 Oct., daily }		{ 3 3
Clinical Instruction in the Royal Infirmary <sup>4</sup>	11 daily. . .	{ The Clinical Professors.....	Hospital Ticket. <sup>3</sup>
Clinical Surgery <sup>4</sup> — Royal Infirmary, Mon. & Thurs. }	17 Oct., 12 o'cl. }	Prof. Annandale	4 4
Clinical Medicine <sup>4</sup> — Royal Infirmary, Tues. & Fri. ... }	15 Oct., 12-2 o'clock }	{ Professors Fraser, Greenfield, and Wyllie; and Simp- son on Diseases of Women..... }	{ 4 4

<sup>1</sup> Fees for second and subsequent attendances, see page 348.

<sup>2</sup> Besides Garden Fee of 5s.

<sup>4</sup> Only open to Students holding the Hospital Ticket.

<sup>3</sup> For Fees, see page 349.

<sup>5</sup> Dates to be arranged.

WINTER SESSION, 1901-1902—*continued.*

Classes.	Days of Opening and Hours of Lectures.	Professors.	Class Fees <sup>1</sup>
Zoology (Elementary) <sup>2</sup>	15 Oct., 12 o'cl	Prof. Ewart. ...	£4 4
Do. (Elementary Practical) <sup>2</sup> .....	15 Oct.		2 2 <sup>3</sup>
Do. (Advanced) <sup>2</sup> .	15 Oct., 1, 30 ,,		3 3 <sup>3</sup>
Anatomy .....	15 Oct., 1 ,,	Prof. Sir William Turner, K.C.B.	4 4
Practical Anatomy ...	1 Oct., <i>daily</i> }		3 3
Medicine .....	15 Oct., 2 o'cl.	Prof. Wyllie .....	4 4
Lecturers.			
Cl. Instruc. on Dis. of Children at Rl. Hosp. for Sick Children <sup>5</sup> ... ( <i>Daily</i> )	23 Oct., & 15 Jan., 11 o'cl.	T. M. Burn-Murdoch, M.D., and Staff of the Rl. Hosp. for Sick Children .....	2 2 <sup>4</sup>
Vertebrate Morphology (with Laboratory Work) .....	15 Oct., 2 ,,	John Beard, D.Sc. ....	3 3 <sup>3</sup>
Comparative Embryology .....	7 Jan., 1 ,,		3 3 <sup>4</sup>
Physics <sup>2</sup> .....	15 Oct., 3 ,,	C. G. Knott, D.Sc.	3 3
Regional Anatomy (Anatomical Demonstrations) .....	15 Oct., 9 ,,	David Hepburn, M.D. ....	2 2 <sup>6</sup>
Diseases of the Eye...		G. A. Berry, M.B.	2 2 <sup>47</sup>
Pathol. Bacteriology	22 Oct.	J. Martin Beattie, M.B. ....	3 3 <sup>4</sup>
Diseases of Tropical Climates.....		Andrew Davidson, M.D. ....	2 2 <sup>4</sup>
Clinical Instruct. on Diseases of the Skin <sup>78</sup>	16 Oct., 11 ,, 8 Jan., 11 ,,	W. Allan Jamieson, M.D. ....	2 2

<sup>1</sup> Fees for second and subsequent attendances, see p. 348.<sup>2</sup> Three Months' Course.<sup>3</sup> Besides charge of 10s. for Laboratory Expenses.<sup>4</sup> Five Shillings University Entrance-Fee for Non-Matriculated Students. See page 29.<sup>5</sup> Two courses, each qualifying. Only open to Students holding the Hospital Ticket. See page 349.<sup>6</sup> When taken along with Practical Anatomy, £1, 1s.<sup>7</sup> Only open to Students holding the Hospital Ticket.<sup>8</sup> Twice a week.

# SUMMER SESSION, 1902.

The Classes will be opened as follows, and will meet daily (Saturdays excepted), unless otherwise stated.

Classes.	Days of Opening and Hours of Lectures.	Professors.	Class Fees. <sup>1</sup>
Elementary Botany.....	1 May, 8 o'clock.	{ Prof. Bayley Balfour.	£4 4 <sup>2</sup>
Practical Botany.....	1 May, 9 ,,		2 2 <sup>2</sup>
Field Demonstrations on Saturdays.			
Operative Surgery and Surgical Appliances	15 April	Prof. Chiene, C.B.	3 3
Forensic Medicine.....	1 May, 9 ,,	{ Prof. Sir Henry D. Littlejohn	{ 4 4
Public Health.....		{ Prof. Hunter Stewart.....	{ 2 2
Prac. Materia Medica (incl. Pharmacy)....	1 May, 8 & 2 ,,	{ Prof. Fraser.....	{ 3 3
Practical Pathology....	1 May, 10 ,,	Prof. Greenfield.	3 3
Obstetrical and Gynecol. Operations— (Tues. & Fri.)	1 May, 10 ,,	Prof. Simpson.	3 3
Pract. Physiol. & Histol.	{ 1 May, 9-11 and 2-4	{ Prof. Schäfer, Dr Milroy and Assistants	{ 2 2 2 2
Advanced Pract. Phys. (Histol.) .....			
Zoology (Elementary)...	1 May, 12 o'clock.	{ Prof. Ewart.	4 4
Zoology (Elem. Prac.)	1 May <sup>4</sup>		2 2 <sup>3</sup>
Natural Hist. Labor....	1 May, 2 ,,		6 6
Invertebrate Zoology...	{ 1 May <sup>4</sup>	{ J. H. Ashworth, D.Sc.....	{ 2 2 3 3 <sup>3</sup>
Do., with Lab. Work)			
Clinical Surgery, <sup>5</sup> Royal Infr. (Mon. & Thur.)	2 May, 12 ,,	Prof. Annandale.	3 3
Clinical Medicine, <sup>5</sup> Royal Infirmary (Tues. & Fri.) .....	{ 2 May, 12 to 2	{ Professors Fraser, Greenfield, and Wyllie; and Prof. Simpson on Dis. of Women.	{ 3 3
Clinical Instruction in the Royal Infirmary. <sup>6</sup>	12 daily. . .	{ The Clinical Professors.	Hospital Ticket. <sup>6</sup>
Physics .....	1 May, 12 o'clock.	Prof. ....	3 3
Chemistry (Organic)....	1 May, 1 ,,	{ Prof. Crum	{ 2 2
Do. (Practical) ..	1 May, 2 ,,	{ Brown.	{ 3 3
Anthropology— (Tues., Wed., Th.)	7 May, 1 ,,	{ Prof. Sir W. Turner, K.C.B.	{ 2 2 <sup>7</sup>

<sup>1</sup> Fees for second and subsequent attendances, see page 348.

<sup>2</sup> Besides Garden Fee of 5s.

<sup>3</sup> Besides charge of 10s. for Laboratory Expenses.

<sup>5</sup> Only open to Students holding the Hospital Ticket.

<sup>7</sup> When taken with Practical Anatomy, £1, 1s.

<sup>4</sup> At hours to be arranged.

<sup>6</sup> See Fees, page 340.

SUMMER SESSION, 1902—*continued.*

Classes.	Days of Opening and Hours of Lectures.	Professors.	Class Fees. <sup>1</sup>
Practical Anatomy.....	1 May, <i>daily.</i>	{ Prof. Sir W. Turner, K. C. B. and Demonstrators.	{ £ s. 2 2
Diseases of the Eye <sup>8</sup> ...	{ 6 May, 9 o'cl. 7 May, 10 „	{ Lecturers. Geo. A. Berry, M.B.....	{ 2 2 <sup>23</sup>
Cl. Instruct. on Dis. of Children, at Rl. Hosp. for Sick Children....	{ 7 May, 11 „	{ T. M. Burn-Murdoch, M.D. and staff of the R. Hosp. for Sick Children	{ 2 2 <sup>23</sup>
Regional Anatomy (Anatomical Demonstrations) <sup>4</sup> .....	{ 1 May, 11 <i>daily.</i>	{ David Hepburn M.D.....	{ ...
Diseases of the Larynx, Ear, and Nose..... ( <i>Mon. &amp; Thurs.</i> )	{ 5 May, 11 o'cl.	{ P. M'Bride, M.D., C.M..	{ 2 2 <sup>3</sup>
Mental Diseases, with Cl. Instruct. at Morningside Asylum ( <i>Mon. Wed. &amp; Frid.</i> ).....	{ 5 May, 3 „	{ Thos. S. Clouston, M.D. ....	{ 2 2 <sup>2</sup>
Diseases of Tropical Climates .....	{	{ Andrew Davidson, M.D.....	{ 2 2 <sup>2</sup>
Experimental Pharmacology <sup>5</sup> .....	{ 1 May.	{ W. C. Sillar, M.B., B.Sc...	{ 3 3
Diseases of the Skin <sup>67</sup>	{ 1 May, 11 „	{ W. Allan Jamieson, M.D.....	{ 2 2
Path. Bacteriology <sup>5</sup> ....	{ 1 May.	{ J. Martin Beattie, M.B. ....	{ 3 3 <sup>2</sup>

## FEES FOR SECOND AND SUBSEQUENT ATTENDANCES.

Second attendances on £4, 4s. Courses, £3, 3s.; on £3, 3s. Courses, £2, 2s.; subsequent attendances free. Second attendances on £2, 2s.

<sup>1</sup> Fees for second and subsequent attendances, see above.

<sup>2</sup> Five Shillings University Entrance-Fee for Non-Matriculated Students. See page 29.

<sup>3</sup> Only open to Students holding the Hospital Ticket.

<sup>4</sup> Free when taken along with Practical Anatomy.

<sup>5</sup> Two hours a day three times a week.

<sup>6</sup> Twice a week.

<sup>7</sup> Only open to students holding the Hospital Ticket.

<sup>8</sup> The class will meet in two sections.



Courses, no reduction; third or subsequent attendances, £1, 1s. Second or subsequent attendances on Class of Diseases of Children, £1, 1s. Clinical Surgery: nine months' ticket, if taken primarily, £6, 6s. (perpetual ticket); three months' after a six months' Course, £3, 3s.; three months' primary entry, £3, 3s.; second three months, £2, 2s.; third three months, £2, 2s. Perpetual ticket for initial payment for any Course in the Faculty, £6, 6s. Practical Classes and Laboratories, no reduction.

## OPPORTUNITIES FOR HOSPITAL PRACTICE.

*Royal Infirmary, Edinburgh.*—At 11 o'clock daily. 780 beds. Perpetual Ticket, in one payment, £12; Annual Ticket, £6, 6s.; Six Months, £4, 4s.; Three Months, £2, 2s. Separate payments, amounting to £12, 12s., entitle to a Perpetual Ticket.

*Royal Edinburgh Hospital for Sick Children.*—120 beds, of which 41 are reserved for Surgical Cases. Hospital Ticket for one year, £1, 1s., entitling Student to attend the General Practice of the Hospital, including the Out-Patient Department.

*Edinburgh Royal Maternity and Simpson Memorial Hospital.*—40 beds available for Clinical Instruction. The fees charged are:—For each Six External Cases, £1, 1s.; for three months' course of Internal Clinical Instruction, £1, 1s.

*City Hospital, Edinburgh.*—For Fevers and Infectious Diseases. Total number of beds, 400. There is at present no fee charged.

*Royal Edinburgh Asylum for the Insane.*—500 beds, available for Clinical Instruction to members of the Class of Mental Diseases. The fee for the course is £2, 2s.

*Number of beds available for the Clinical Instruction of Students of the University, 1840.*

MATRICULATION, &c. See page 27.

## CLASS SESSIONS.

There are Two Sessions in each year, viz. :—

I. The Winter Session, opens on Tuesday, 15th October 1901, and closes on Friday, 21st March 1902. Practical Anatomy begins on Tuesday, 1st October 1901. The Practical Anatomy Rooms remain open till the end of March.

The Classes will meet for the last time before the Christmas Vacation on Friday, 20th December 1901, and will reassemble on Tuesday, 7th January 1902.

II. The Summer Session, which opens on Thursday, 1st May, and closes on Wednesday, 16th July 1902. Operative Surgery begins Tuesday, 15th April. The Practical Anatomy Rooms remain open till the end of July.

### LABORATORIES, MUSEUMS, &c.

The University contains the following Laboratories and Museums, several of the latter belonging in part to the Professors of the respective subjects :—

#### I. LABORATORIES.

THE PHYSICAL LABORATORY, established with the view of affording Students a practical knowledge of the construction and use of physical apparatus, and the mode of conducting experimental inquiries, is open daily from 10 to 3, under the superintendence of the Professor.

THE ROYAL BOTANIC GARDEN LABORATORY, open daily for the practical study of plants and for research, under the superintendence of the Professor, assisted by L. Lewton-Brain, B.A., and A. W. Borthwick, B.Sc.

PHYSIOLOGICAL LABORATORY, for the prosecution of Physiological Research, and for the study of Practical Physiology, open daily, under the superintendence of the Professor, assisted by T. H. Milroy, M.D., B.Sc.; P. T. Herring, M.D.; John Malcolm, M.D., and Sutherland Simpson, M.B., Ch.B., B.Sc.

PRACTICE OF PHYSIC LABORATORY, for the study of Medicine, and for research in connection with the Practice of Physic, open daily, under the superintendence of the Professor, assisted by James G. Cattnach, M.B., C.M.

DISSECTING ROOMS, open daily under the superintendence of Professor Sir William Turner, K.C.B., assisted by David Hepburn, M.D.; David Waterston, M.D., C.M.; E. B. Jamieson, M.B., Ch.B.; T. W. Struthers, M.B., Ch.B.; and other assistants. Open 1st October 1901, and 1st May 1902; and continue open till the end of March and of July for the Winter and Summer Sessions respectively.

THE CHEMICAL LABORATORIES<sup>1</sup> (distinct from the Practical Chemistry Class Room), have accommodation for forty Students. They contain the necessary equipment for a complete course of instruction in

<sup>1</sup> Fees for Chemical Laboratory :—*Whole day*—Winter Session, £10, 10s.; or Oct.-Dec., or Jan.-March, or Summer Session, £5, 5s. *Half day*—Winter Session, £6, 6s.; Oct.-Dec., or Jan.-March, or Summer Session, £3, 3s. Preference will be given to Students in the above order. Students who are not Matriculated may attend the Chemical Laboratory on payment of the Entrance Fee of 5s., in addition to the Laboratory Fee.

the various branches of chemical work and for research. The instruction given includes complex qualitative analysis, quantitative, inorganic and organic analysis (with special courses in gas analysis, assaying, &c.), and chemical preparations. The training is suited not only for students studying for Science and Arts Degrees or for the Examinations of the Institute of Chemistry, but also for persons desiring to qualify themselves as analysts, technical chemists, &c. The Chemistry Department will be closed on 21st March and 16th July for the Winter and Summer Sessions respectively

The Laboratories are open from 9.30 to 4.30 daily during the Winter and Summer Sessions, and are under the charge of Professor Crum Brown, assisted by Leonard Dobbin, Ph.D.; Hugh Marshall, D.Sc.; W. W. Taylor, M.A., D.Sc.; J. P. Longstaff, and James Kerr, B.Sc.

**OBSTETRICAL AND GYNECOLOGICAL LABORATORY**, for research and study of practical work, under the superintendence of the Professor, assisted by G. F. Barbour Simpson, M.B., Ch.B.

**TUTORIAL CLASS OF CLINICAL MEDICINE**, in the Wards of the Royal Infirmary, by J. G. Cattanach, M.B., C.M.; Edwin Matthew, M.B., Ch.B.; and James M. Beattie, M.B.; with G. F. Barbour Simpson, M.B., Ch.B., for Diseases of Women: under the superintendence of the Clinical Professors.

**NATURAL HISTORY LABORATORIES**, for study of the structure and development of Invertebrate and Vertebrate forms, open daily, under the superintendence of the Professor, assisted by J. Beard, D.Sc., Ph.D., and J. H. Ashworth, D.Sc.<sup>1</sup>

**MATERIA MEDICA LABORATORIES**, for the study of Practical Materia Medica and Practical Pharmacy, and for Pharmacological and Pharmaceutical research, open daily, under the superintendence of the Professor, assisted by William C. Sillar, M.B., C.M., B.Sc., and D. B. Waters, M.B., Ch.B.

**TUTORIAL CLASS OF CLINICAL SURGERY AND SURGICAL PATHOLOGY**, in the Infirmary, by R. Black Purves, M.B., C.M., F.R.C.S.E., and the Resident Surgeons, under the superintendence of the Clinical Professor.

**TUTORIAL CLASS IN MIDWIFERY**, by G. F. Barbour Simpson, M.B., Ch.B., under the superintendence of the Professor.

**FORENSIC MEDICINE LABORATORY** under the superintendence of the Professor, assisted by T. W. Drinkwater, Ph.D.

**PUBLIC HEALTH LABORATORY**, for laboratory work for candidates for Qualification in Public Health and for Hygienic investigation, comprises three departments, viz.: a Chemical, a Bacteriological, and a Meteorological Department, open daily, under the superintendence of

<sup>1</sup> Fees—Winter Session, £10, 10s.; Summer Session, £6, 6s.

the Professor, assisted by J. Buchanan Young, M.B., D.Sc., (Pub. Health). Opens 15th October 1901 and 1st May 1902.<sup>1</sup>

SURGICAL LABORATORY, divided into two parts—(a) General Surgical Pathology, (b) Bacteriology,—is utilised for teaching Systematic Surgery, and every facility is afforded for investigation, under the superintendence of the Professor, assisted by John Stevenson, M.B., C.M., F.R.C.S.E.

PATHOLOGICAL LABORATORY, for the study of Pathological Anatomy and for Pathological Research, including Histological and Bacteriological Departments, under the superintendence of the Professor, assisted by James Martin Beattie, M.B., C.M., and George Lyon, M.B., C.M., Ch.B.

THE ROYAL EDINBURGH ASYLUM is open to members of the Class of Mental Diseases for Practical Instruction, under the superintendence of the Physician-Superintendent.

PRACTICAL INSTRUCTION in the use of the Ophthalmoscope and in the detection of errors of refraction is given to members of the Class of Diseases of the Eye at the Eye Wards of the Royal Infirmary, under the Superintendence of the Lecturer.

DISEASES OF THE LARYNX, EAR AND NOSE.—In connection with this subject Tutorial Instruction in the Practical Methods of examining patients and in the use of instruments and appliances is given by Dr Logan Turner at suitable hours.

DISEASES OF THE SKIN.—Tutorial Instruction in the Practical Methods of examining patients, of using the microscope in the diagnosis of cutaneous affections, in the employment of instruments and the application of remedies, is given at suitable hours, by Dr Norman Walker.

DISEASES OF CHILDREN.—Clinical Instruction in the wards, out-patient department, and *post-mortem* room at the Royal Hospital for Sick Children.

II. MUSEUMS. See pages 55-57.

## Courses of Lectures, &c.

1901-1902.

### I. BOTANY.

PROFESSOR BALFOUR.

*Summer Session, 1902.*

1. LECTURES.—The Course is a general one—Organographical, Physiological, and Taxonomic. Lectures are given every Monday, Tuesday, Wednesday, Thursday, and Friday.

<sup>1</sup> Fees—Winter Session, £10, 10s.; Summer Session, £6 6s.

2. PRACTICAL CLASS.—In this class opportunity is given for the examination of microscopic structure of plants, and for the study of life-histories of plants illustrating the lectures. It is conducted by the Professor and Assistants.

3. EXCURSIONS. — Excursions are made on Saturdays for the practical study of plants in the fields.

The Royal Botanic Garden, with the Botanical Museum and Herbarium, are open daily for the examination of living as well as preserved specimens of plants.

## II. NATURAL HISTORY.

### PROFESSOR EWART.

1. LECTURES ON ZOOLOGY.—*Winter Session.*—The first part of the course will treat of the Principles of Biology as illustrated by the Life-History, Morphology, and Physiology of one of the Vertebrata. The Distinctive Characters of the Chordata and the structure, habits, &c., of a series of vertebrate types will next be considered. The rest of the course will be chiefly devoted to : (1) Leading types of Invertebrates ; (2) Structure and life-history of the more important animal parasites ; and (3) Elements of Embryology, Classification, and Geographical Distribution of Animals.

*Summer Session.*—An Elementary Course, qualifying for the First Professional and the First B.Sc. Examinations, and *pro tanto* for graduation in Arts, will be given by the Professor, during the Summer Session 1902.

2. ELEMENTARY PRACTICAL ZOOLOGY.—*Winter and Summer Sessions.*—In these Classes Students have the opportunity of studying practically the more important types described in the Lectures, amongst others :—Amœba, Paramœcium, Hydra, Hirudo, Arenicola, Helix, Astacus, Raia, Rana, Columba, and Lepus.

3. ADVANCED COURSES.—These Courses are intended to assist students preparing for the Degree of B.Sc. in Zoology.

(1) The Intermediate Course will be held during the Summer Session, and will be devoted to the Systematic Zoology of the

Invertebrata. This class is prescribed for the Second B.Sc. Examination in Zoology and Comparative Anatomy.

(2) During the first half of the Winter Session an Advanced Course of Lectures and Laboratory work will be given by Dr Beard, University Lecturer on Vertebrate Zoology, on the Comparative Morphology of the Vertebrata. (See Faculty of Science.)

The Laboratory work will extend over the first half of the Winter Session and the Summer Session.

RESEARCH WORK.—The Laboratories are also available during both Sessions for research. For Regulations, see page 117.

#### COMPARATIVE EMBRYOLOGY.

#### VERTEBRATE MORPHOLOGY.

J. BEARD, D.Sc.

. For Synopses, see under Faculty of Science.

### III. CHEMISTRY.

PROFESSOR CRUM BROWN.

I. LECTURES—In the Lectures the general laws of chemical action are explained and illustrated.

The chief non-metallic elements and their more important compounds are discussed in detail. The metals and the different series of metallic salts are considered more generally, details being given in the case of the more important substances.

The principles upon which the classification of organic substances is based are explained, and the properties of the chief groups illustrated by means of examples.

Tutorial Classes, once a week, are conducted by Dr Dobbin.

A course of 50 lectures on Organic Chemistry is delivered in Summer.

A Class for Advanced Students is held in Winter. The subject for the Winter of 1901-1902 is "Selected Chapters in Inorganic Chemistry."



2. LABORATORY.—In the Laboratory, Students who can devote several hours each day to work, are taught Chemical Analysis (including Mineral Analysis, Organic Analysis, and Gas Analysis), the preparation of chemical substances, and the examination and determination of their properties. Full equipment for instruction in metallurgical work and assaying has recently been provided. Students who are sufficiently advanced in such practical work may engage in the investigation of chemical problems under the superintendence of the Professor and the chief assistant.

3. PRACTICAL CLASSES.—The work of these classes consists in the study of the reactions of the commoner Salts.

*Class-Book.*—Notes on Reactions of Salts (Thin).

Students who have worked at least three months in the Laboratory need not attend the class of Practical Chemistry before appearing for the First Professional Examination in Medicine, for the First B.Sc. Examination, or for Examination in Chemistry for M.A.

#### IV. PHYSICS.

PROFESSOR (Summer), and CARGILL G. KNOTT, D.Sc.  
(Winter), *Lecturer.*

The subjects embraced in the Course of Physics are :—

1. Properties of Matter—including Inertia, Gravitation, Molecular Forces, &c.
2. Abstract Dynamics—including Kinematics and Newton's Laws of Motion, with their consequences as regards Statics and Kinetics of Solid, Liquid, and Gaseous Bodies, and the Physical Measurement of Time.
3. Sound, and Wave-propagation in general, Intensity, Pitch, and Quality of Musical Sounds, Harmonics, Concords, &c.
4. Heat, its Nature, Effects, Measurement, Transference, and Transformations—Measurement of Temperature and of Absolute Temperature ; Thermo-dynamics.

5. Light (1) Geometrical Optics, Speed of Light, Laws of Reflection and Refraction; Construction and Effects of Mirrors, Prisms, Lenses, and Microscopes; Images, Conditions of Distinct Vision; (2) Physical Optics, Interference, Dispersion, Diffraction, Double Refraction, Polarization, Spectrum Analysis.

6. Electricity, including Frictional and Voltaic Electricity, Thermo- and Magneto- Electricity, Electro-Dynamics, and Magnetism, with their practical applications. Measurements of Potential, Electromotive Force, Current, &c., Batteries, Dynamos, Electrometers, Galvanometers, Voltameters, &c.

Text-books: Tait's *Properties of Matter*; Knott's *Physics*.

## V. ANATOMY.

PROFESSOR SIR WILLIAM TURNER, K.C.B.

### *Winter Courses.*

I. LECTURES ON ANATOMY, at 1 P.M.—It is intended in this Course to bring before the Student, in a systematic manner, the structure of the Human Body. The different systems and organs will be described, both in the more obvious arrangements and relations of parts which can be examined by the naked eye, and in their more minute or microscopic structure. The Course includes, therefore, both Textual or General Anatomy and Descriptive Anatomy. The Lectures are illustrated by recent dissections, by wet and dry preparations, by a large collection of Osteological specimens, and by drawings and diagrams. Structures too minute to be recognised by the naked eye are demonstrated under the Microscope.

To assist the Junior Members of the Lecture Class to acquire a knowledge of Osteology, &c., Tutorial Demonstrations on the Bones and Muscles will be given during the earlier months of the Session without additional fee. All the members of this class have access to a systematically arranged series of osteological specimens and of models. Written Examinations for

both Junior and Senior Students are held periodically during the Session.

*Text-Books.*—Gray's "Anatomy," or Cleland and Mackay's "Anatomy," Quain's "Elements of Anatomy," Holden's "Osteology."

2. PRACTICAL ANATOMY, under the superintendence of the Professor, aided by the Demonstrators, David Hepburn, M.D., C.M.; David Waterston, M.A., M.D., C.M.; E. B. Jamieson, M.B., Ch.B.; J. W. Struthers, M.B., C.M., and by several other assistants. Examinations of both Junior and Senior Students on dissected parts are conducted by the Demonstrators and the Professor. Special tutorial Demonstrations will be given to Senior Students on the joints, brain, organs of special sense, and other viscera.

This Course will commence on 1st October. The Dissecting-rooms are open from 9 A.M. to 5 P.M., and on Saturdays from 9 A.M. to noon. The Mackenzie Bursaries are awarded to members of this Class for proficiency in dissection.

*Text-Books.*—"Demonstrations of Anatomy," by Ellis, or Heath's "Practical Anatomy," or Holden's "Manual of the Dissection of the Human Body," or Cunningham's "Manual of Practical Anatomy."

#### REGIONAL ANATOMY (ANATOMICAL DEMONSTRATIONS).

DAVID HEPBURN, M.D., *Lecturer.*

In this Course, which is conducted in the Theatre, the structure of the human body is displayed and demonstrated topographically, from the surface inwards.

This Class meets about ninety times, and non-competitive Written Examinations are held monthly during the Session.

#### *Summer Courses.*

##### PRACTICAL ANATOMY.

PROFESSOR SIR WILLIAM TURNER, K.C.B.

This Course, beginning on 1st May, is the same as in Winter. The Rooms are open from 9 A.M. to 5 P.M.; on Saturdays from

9 A.M. to noon. Examinations are conducted on dissected parts by the Professor and by the Demonstrators, David Hepburn, M.D., C.M.; D. Waterston, M.A., M.D., C.M.; E. B. Jamieson, M.B., Ch.B.; and T. W. Struthers, M.B., Ch.B., and other assistants, and the joints, brain, and organs of sense will be specially demonstrated.

#### REGIONAL ANATOMY (ANATOMICAL DEMONSTRATIONS).

DAVID HEPBURN, M.D., *Lecturer.*

This Course, open without additional Fee to those engaged in Practical Anatomy in the Summer, will consist of demonstrations on some special departments of Anatomy.

### VI. PHYSIOLOGY.

PROFESSOR SCHÄFER, WITH DR T. H. MILROY, *Lecturer*,  
AND ASSISTANTS.

#### SYSTEMATIC LECTURES.

Course of about 100 Lectures and Demonstrations, held in Winter :—

The Courses in Physiology and Practical Physiology embrace the study of the minute Structure, Composition, and Functions of the Tissues and Organs of the Body.

*Text-Books.*—*Elementary.*—Starling's "Elements of Physiology" or "Kirke's Physiology," Schäfer's "Essentials of Histology." *More advanced.*—Waller's "Physiology," Stewart's "Physiology," Foster's "Physiology," or Howell's "Text-Book of Physiology," Schäfer's "Advanced Text-Book of Physiology," Microscopical Parts of "Quain's Anatomy."

#### PRACTICAL PHYSIOLOGY.

This Course is divided into three sections—

1. *Experimental Physiology*, in which every student performs the chief experiments illustrating the functions of muscle, nerve, the heart, &c., and records the results by graphic methods.

This Class is held in the Winter Session.

2. *Practical Chemical Physiology*, in which every student performs the qualitative and quantitative analysis of the Urine in its normal and abnormal conditions, with special reference to clinical work, and such practical work at the Chemistry of Proteids and Carbohydrates, Blood, Milk, Bile, and Digestion, as is possible in a class.

This Class is held in the Winter Session.

*Text-Book.*—Halliburton's Essentials of Chemical Physiology.

3. *Practical Histology*, in which every Student prepares, examines, and preserves for himself most of the tissues and organs of the body. Each student is provided with a microscope, and all reagents, but it is an advantage for a student to bring his own microscope, provided it is a sufficiently good one. The Professor or Assistants should be consulted as to the best kind of microscope to be obtained.

*Text-Book.*—Schäfer's "Course of Practical Physiology."

This Class is held in Summer.

#### ADVANCED PRACTICAL PHYSIOLOGY.

PROFESSOR SCHÄFER, T. H. MILROY, M.D., B.S.C., *Lecturer*, AND ASSISTANTS.

See Synopsis under Faculty of Science.

#### PHYSIOLOGICAL RESEARCH.

The Physiological Laboratory is open daily for the prosecution of Research. Application must be made to the Professor.

#### VII. MATERIA MEDICA.

PROFESSOR THOMAS R. FRASER.

Materia Medica comprises the subjects of pharmacognosy, pharmacy, pharmacology, and therapeutics, diet, remedial uses of electricity and galvanism, heat and cold, climate, &c. Instruction in Materia Medica is given in (A) a course of 100 Lectures during the Winter Session, and in (B) Practical

Classes during the Summer Session, and of equivalent duration during the Winter Session.

A.—LECTURES ON MATERIA MEDICA—This course includes the natural history, sensible and chemical properties, physiological action (or pharmacology), therapeutical uses, and modes of administering remedies, ordinarily so called. Such remedies consist of (*a*) inorganic substances; (*b*) chemical products; (*c*) vegetable substances; (*d*) animal substances. Although formerly comprised in the course of instruction in Materia Medica, the remedial uses of Diet, Electricity, Climate, &c., cannot now be taught with any advantage in this course, as, under the New Medical Ordinances, the study of Materia Medica is required to be completed before the student has entered upon the study of the diseases to which the above are applicable.

B.—PRACTICAL CLASSES.—*Practical* instruction is given in the following subjects, which cannot satisfactorily be taught in lectures:—1. Pharmacy, or the processes for obtaining the pharmaceutical preparations of drugs. 2. Prescription-writing. 3. Dispensing, or the making up of medicines in forms suitable for administration in disease.

It is recommended that the Practical Class be attended before the lectures on Materia Medica. Practical classes are taught in the Summer Session daily, at such hours as are found most convenient. A winter class will also be formed in October.

#### RESEARCH LABORATORIES.

The above laboratories will be open daily for research on the pharmacological action and chemical composition of medicinal substances, under the superintendence of the Professor and his assistants. Application to be made to the Professor.

#### EXPERIMENTAL PHARMACOLOGY.

W. C. SILLAR, M.B., C.M., B.Sc., *Lecturer*.

This course consists of (1) practical instruction in the methods employed in pharmacological research and (2) the experimental



study of the pharmacological action of a number of typical medicinal substances.

The Course is adapted for students who desire a practical knowledge of pharmacology, and who have attended the Class of *Materia Medica*.

Previous attendance at the Class of Advanced Practical Physiology is strongly recommended.

The Course will commence in May.

## VIII. PATHOLOGY AND MORBID ANATOMY.

### PROFESSOR GREENFIELD.

This Course includes General Pathology, General Pathological Anatomy and Histology, and Systematic Morbid Anatomy:—

1. General Pathology (including General Pathological Anatomy), *i.e.* the study of the processes of disease, &c. Under this head are considered Degenerative Processes, Inflammation, Repair, Morbid Growths, &c.

2. General Etiology is treated in fuller detail with reference to Parasitic and Infective Diseases, and includes Bacteriology and methods of bacteriological research.

3. Systematic Morbid Anatomy and Histology—a study of the more important diseases of the principal systems and organs of the body.

In illustration of the lectures, there are frequent naked eye, microscopic, and lantern demonstrations.

### PRACTICAL PATHOLOGY.

Classes for Practical Instruction in MORBID ANATOMY and PATHOLOGICAL HISTOLOGY are conducted in the Pathological Laboratory—microscopes and other necessary apparatus being supplied. The Course consists of—1st. Naked Eye Demonstrations; 2nd. Histological investigation and preparation of Morbid Structures and Organs; 3rd. Elementary Bacteriology.

In Winter the class meets five times a week, from the beginning of the Session till the end of January; in Summer,

five times a week, from the beginning of May till the end of the Session.

The Laboratory is also open daily from 10 A.M. till 4 P.M. for Pathological Research, under the Professor and his Assistants.

## IX. FORENSIC MEDICINE.

PROFESSOR SIR HENRY DUNCAN LITTLEJOHN.

### \* MEDICAL EVIDENCE GENERALLY.

(1) Documentary—(2) Oral—(3) Experimental — Examination of the living; identity; examination of the dead; identity; cause of death; exhumations, autopsies.

### MEDICAL EVIDENCE SPECIALLY.

*Questions affecting Health or Life.*—(1) Assaults and Homicide—Wounds and other external injuries; asphyxia. Starvation. Heat and cold. Poisons—(2) Suicide—(3) Offences against Chastity—Rape, &c.; concealment of pregnancy; criminal abortion; infanticide—(4) Malpraxis and Neglect of Duty.

*Questions affecting Civil Rights or Social States.*—Marriage and Divorce. Impotence and sterility. Live birth. Survivorship. Insanity. Feigned diseases.

*Text-Books.* — Taylor's "Medical Jurisprudence," Guy's "Principles of Forensic Medicine."

## X. PUBLIC HEALTH.

The Course consists of Thirty Lectures and Demonstrations, and embraces the following:—

1. General consideration of pathogenic and non-pathogenic micro-organisms—Their nutrition—The effects of heat, light, and chemical substances—Toxins and anti-toxins.

2. *Air, Climate and Soil.*—Variations in the chemical and bacteriological constituents and meteorological condition of the atmosphere as caused by seasonal and local conditions—

Climate as determined by winds, temperature, moisture and altitude—Healthy and unhealthy climates—Sanatoria Soil as affecting health.

3. *Water Supply.*—Sources—Filtration—Storage—Causes of contamination.

4. *Habitation as affecting Health.*—Site and exposure—The dwelling—Air-space—Ventilation—Sewage and refuse removal and disposal—Sanitary fittings.

5. *Foods.* Milk—Animal foods—Cereal foods—Adulteration—Preserved foods—Food-poisoning.

6. Vital statistics, and notification of infectious diseases.

7. Causes of the occurrence and spread of the more commonly met with infective diseases—Means of prevention Isolation hospitals—Disinfection of clothing, of rooms, and of emanation from the sick.

8. School hygiene.

9. Disposal of the dead.

## XI. PRACTICE OF MEDICINE.

PROFESSOR WYLLIE.

The Course of Instruction comprises Lectures on the ætiology, morbid anatomy, clinical history, diagnosis, prognosis, and treatment of—

I. General diseases.

II. The diseases of the different systems and organs of the body.

It is intended that each Course shall be, as far as possible, a complete review of the present aspects of the Principles and Practice of Medicine.

The Course is illustrated by specimens of morbid anatomy and by numerous drawings, diagrams, and charts from the Anatomical Museum, and from the Professor's private collection.

### TUTORIAL CLASS.

Practical instruction in connection with the Course is given to the members of the Class by the Assistant.

*Text-Books.*—Fagge's, Roberts's, Bristowe's, Osler's, or Frederick Taylor's "Practice of Medicine."

### MENTAL DISEASES.

THOMAS S. CLOUSTON, M.D., *Lecturer.*

This Course consists of—

1. Systematic Lectures in the University during the Summer Session on the Classification, Symptoms, Causes, and Treatment of Mental Diseases, "Macpherson's Mental Afflictions." The Pathology of Insanity by Dr W. Ford Robertson.

2. Pathological demonstrations, naked eye, lantern, and microscopic, in the University and at the Royal Asylum, Morningside, of the Morbid Anatomy of Insanity. Students will have an opportunity of original investigation in the Pathological Museum of the Asylum.

3. Clinical instruction at the Royal Asylum, Morningside (West House), in all the forms of Mental Disease. Students have the opportunity of personally coming in contact with and examining the cases, so as to learn the modes of managing and dealing with patients labouring under Mental Disease, and they are exercised in the diagnosis of Insanity and the drawing up of certificates; the aim being to enable them to recognise its early stages, to distinguish its varieties, to adopt suitable treatment, and to advise the relatives as to sending the patient to an asylum. There is a clinical field of 500 beds, comprising all the wards except those for private patients. This part of the course extends through the Summer and the last month of the Winter Session.

4. Instruction in regard to the medico-legal, hereditary, educational, and social relations of Mental Disease, and on its bearings and significance in ordinary medical practice.

There are Free Clinical Clerkships, tenable for three months, in the Royal Edinburgh Asylum, and in several other Asylums, in connection with the class.

*Text-Book.*—Dr Clouston's "Clinical Lectures on Mental

Diseases," Maudsley's "Pathology of the Mind," Bevan Lewis' "Text-Book of Mental Diseases."

## XII. SURGERY.

PROFESSOR CHIENE.

### *Winter Session.*

1. *Lectures.* This Course is devoted to a systematic consideration of the Principles and Practice of Surgery. Each course is intended to embrace, as far as possible, a complete view of the present aspects of the Science and Practice of Surgery.

Written examinations are held at stated periods, and at the end of the Session a practical examination is held on the work of the Tutorial Classes.

2. *Tutorial Instruction*, at hours most convenient for the students, includes—

- (a) *Practical Instruction in Bandaging and the Treatment of Fractures and Dislocations* on the living subject. This class is divided into sections for Senior and Junior Students.
- (b) Weekly Revisal of the Lectures, together with Demonstrations of the Preparations in the Surgical Museum illustrative of the Lectures on Surgery.
- (c) Special Demonstrations to Senior Students on
  - (1) Surgical Anatomy.
  - (2) Surgical Pathology.
  - (3) Surgery of the Ear.

These Demonstrations are illustrated by museum specimens and lantern slides.

### *Summer Session.*

The Summer Session is devoted to the Practical Aspects of Surgery. Special attention is given to Surgical Anatomy and Operative Surgery. The class meets in April, May, and June. Oral examinations and tutorial instruction in the Treatment of Fractures and Dislocations, and in the uses of surgical instruments, form a special part of the course. Special demonstrations on Surgical Pathology.

The Surgical Laboratory for (1) Surgical Pathology; and (2)

Bacteriology, is open daily for original work during the Winter and Summer Sessions, under superintendence of the Professor, assisted by John Stevenson, M.B., C.M. Applications to be made to the Professor.

*Text-Books—Winter Session.*—The Professor's "Lectures on the First Principles of Surgery"; Keen and White's *Text-Book of Surgery*; Da Costa's "Manual of Modern Surgery." *Summer Session.* — The Professor's "Lectures on Surgical Anatomy," and Joseph Bell's "Manual of Surgical Operations," 1892; Kocher's *Operative Surgery* (translated by H. J. Stiles).

### DISEASES OF THE EYE.

GEORGE ANDREAS BERRY, M.B., C.M., *Lecturer.*

The Course will consist of at least twelve systematic lectures in the University, and of twelve or more clinical lectures at the Royal Infirmary.

In addition there will be meetings for individual clinical instruction, including Refraction and Ophthalmoscopy.

*Text-Books.*—Berry's "Diseases of the Eye," Swanzy's "Handbook on Diseases of the Eye," Nettleship on "Diseases of the Eye," Fuchs' "Text-Book of Ophthalmology."

### DISEASES OF THE LARYNX, EAR, AND NOSE.

P. M'BRIDE, M.D., C.M., *Lecturer.*

A Summer Course of Instruction given in the Royal Infirmary consists of not less than eighteen lectures, partly systematic and partly clinical. These are delivered on Mondays and Thursdays, at 11 o'clock A.M.

A concise account of the more common diseases of the Ear, Nose, and Throat, and their treatment, is given in the systematic lectures.

In the clinical lectures, patients are brought before the class and their condition is examined into and discussed, and, where possible, operative treatment is carried out. Methods of examination, instruments and appliances used in diagnosis and treatment are demonstrated.



Members of the class may attend the out-patient clinics of the Department on Tuesdays and Fridays at eleven o'clock, and operations in the Wards.

Tutorial instruction in the practical methods of examining patients, and in the use of instruments and appliances, is given by Dr Logan Turner, at suitable hours in connection with the lectures.

### XIII. MIDWIFERY AND THE DISEASES OF WOMEN AND CHILDREN.

PROFESSOR SIMPSON.

The Course of Instruction comprises Lectures on—

I. Anatomy and Physiology of the Female Organs of Reproduction.

II. Physiology, Pathology, and Therapeutics of Pregnancy.

III. Parturition—Natural (Eutocia), and Morbid (Dystoci). a

IV. Hygiene, Pathology, and Therapeutics of the Puerperal State.

V. Hygiene, Pathology, and Therapeutics of Infancy.

VI. Special Pathology and Therapeutics of the Female Organs of Reproduction.

One day weekly is devoted to the Gynecological Section of the Course; and the Diseases of Women may be studied clinically in the Royal Infirmary, in the Buchanan Medical Ward, in connection with the class of Clinical Medicine.

After the Class-roll is made up, Tutorial classes are formed for Practical Instruction in the use of Obstetric and Gynecological Instruments and Appliances.

Midwifery may be studied clinically in the Royal Maternity, of which the Professor is, *ex officio*, one of the Medical Officers, and where he attends during the first three months of the Winter Session. The Professor makes a special Clinical visit with the Students who have taken the Maternity Ticket, on Saturdays, at 10 A.M.; and he or one of the Assistant Physicians gives Clinical Instruction on Wednesday afternoons at 4 P.M.

#### *Summer Session.*

A Course of Instruction in Obstetric and Gynecological

Operations, with Demonstrations of the use of Instruments and Appliances, is conducted in the Summer Session, at 10 A.M.

On Tuesdays and Fridays the Professor gives Lectures and Demonstrations. On the other days the sections of the class are trained in the investigation and treatment of Female Diseases, and the members of the class have an opportunity of practising operations on lay figures.

*Text-Books.*—Playfair's, Lusk's, or Parvin's "Midwifery." The Professor's "Contributions to Obstetrics and Gynecology." Hart and Barbour's "Manual of Gynecology." Ballantyne's "Diseases of Infancy."

#### XIV. CLINICAL SURGERY.

PROFESSOR ANNANDALE.

The subjects of this Course are the symptoms, diagnosis, pathology, and treatment of Surgical diseases and injuries as met with in the living body, and the modifications and complications which occur in connection with them. Patients are brought before the class in the University-Clinical Surgical Theatre of the Infirmary, and their condition is carefully examined and discussed, due regard being taken to avoid injuring their feelings or aggravating their disease. The history and probable nature of the case having been stated, the proper treatment is suggested and described, and any required operations or other treatments are carried out at once, or at the first convenient opportunity. Ward Cliniques are given at least two days in the week by the Professor, and on other two days in the week the cases of patients attending the out-patient department are specially demonstrated by the Assistant Surgeon, Mr Hodsdon, so as to instruct the students in the common and minor surgical affections. Practical instruction as to the examination of patients, the observation of symptoms, the treatment of surgical emergencies, the use of instruments, the application of dressings, and other surgical details is given by the Clinical Tutor (R. Purves, M.B., F.R.C.S.E) attached to the Chair. This latter instruction is *free* to all Students attending the Course.

*Text-Books.*—Any of the recent standard works on Surgery. Students are also advised to study the best works (old and new) on the special subjects of Practical Surgery.

In connection with this class it is to be noted that under the New Regulations (1) Nine months' attendance on Lectures is required, and it is advised that at least six months of this be continuous. (2) That attendance at the *Ward* Cliniques is compulsory and forms part of the Course. (3) Students must also produce a certificate that they have acted as Dresser or Clerk in Surgical Wards for six months.

## XV. CLINICAL MEDICINE.

PROFESSORS FRASER, GREENFIELD, AND WYLLIE, AND  
(FOR DISEASES OF WOMEN), SIMPSON.

This Course, consisting of Clinical Lectures and Instruction in the University wards of the Royal Infirmary, is conducted conjointly by the Clinical Professors - all being on duty both in the Winter and Summer Sessions, the Professor of Midwifery giving lectures and demonstrations on Gynecology on certain days.

The Course consists of:—1. Practical Instruction on three days a week at the bedside. 2. Critical Expositions and Discussions of cases in the lecture-room on two days a week.

Every facility is afforded to students to act as Clinical Clerks, and those are preferred who have had a course of tutorial instruction. At the close of each Summer Session, six gentlemen, who have been members of the Class, are appointed Resident Physicians in the Clinical Wards for the following Winter and Summer Sessions.

### CLINICAL TUTORIAL CLASS.

Practical instruction in the Methods of Physical Examination is given to the Class by the University Clinical Tutors.

Junior Students are strongly advised to take this course of instruction along with their first course of Clinical Medicine.

## DISEASES OF THE SKIN.

WILLIAM ALLAN JAMIESON, M.D., C.M., *Lecturer.*

The Course of Instruction, which is given in the Royal Infirmary, consists of not less than twenty Clinical Lectures, delivered in the Medical Theatre on Wednesdays and Saturdays at 11 o'clock a.m. In these, patients are brought before the class and their condition is examined into and demonstrated, and the appropriate treatment prescribed and illustrated.

The Ordinary Out-patient Cliniques of the Department are held on Wednesdays and Saturdays, and operations are performed in the Wards on Tuesdays and Fridays. These are open to all Students holding an Infirmary Ticket, and also to Members of the class.

Tutorial Instruction in the practical methods of examining patients, of using the microscope in the diagnosis of cutaneous affections, in the employment of instruments and the application of remedies, is given by Dr Norman Walker, at suitable hours in connection with the Lectures.

*Text-Books.*—Dr Jamieson's "Diseases of the Skin," Dr Norman Walker's "Introduction to Dermatology."

## CLINICAL INSTRUCTION ON DISEASE IN CHILDREN

*(at the Royal Hospital for Sick Children).*

THOMAS MONCK BURN MURDOCH, M.B., *Lecturer*, and the Staff of the Royal Hospital for Sick Children.

The Courses consist of one Clinical Lecture and two Ward Cliniques weekly, demonstrations in the post-mortem room, and attendance at the out-patient department, also at operations on fixed days. In the surgical out-patient department a large number of minor surgical operations are performed daily.

The Courses are made as practical as possible, and students have full opportunities given for studying cases clinically and for becoming acquainted with the methods of examining children, and the diseases more peculiar to them.

At least two Courses will be conducted annually, one in the

Winter before Christmas, and one in the Summer Session. A second Winter Course after Christmas will also be given if sufficient students come forward.

## COURSE OF INSTRUCTION IN TROPICAL DISEASES SPECIALLY QUALIFYING FOR MEDICAL APPOINTMENTS IN THE CROWN COLONIES AND PROTECTORATES.

### I. PATHOLOGICAL BACTERIOLOGY.

JAMES MARTIN BEATTIE, M.B., C.M., *Lecturer.*

The Course is a practical one, consisting of Laboratory Instruction, Demonstrations, and Lectures :—

(a) *General.*—Morphology and Life History of Micro-organisms ; Preparation of Culture Media ; Methods of Isolation and Cultivation, including Anaerobic Cultures ; Methods of Staining ; Separation of Bacterial Products ; Inoculation, &c.

(b) *Special.*—A Systematic Study of Organisms Pathogenic to the Human Subject—their characters, their modes of producing disease, &c. A number of the more important non-pathogenic organisms are also studied.

The Course is given in Winter, but may also be given in Summer.

*Text-Book.*—“Manual of Bacteriology,” by Muir and Ritchie.

### II. DISEASES OF TROPICAL CLIMATES.

ANDREW DAVIDSON, M.D., *Lecturer.*

The Course will consist of twenty-five Lectures, and of demonstrations of the Micro-organisms of tropical diseases.

The Lectures will comprise an account of—1. The chief endemic maladies—Malaria, Dysentery, Liver Abscess, Beriberi, Yaws, &c., and of Sunstroke.

2. Leprosy and other bacterial diseases.

3. The three great tropical pestilences, Cholera, Plague, and Yellow Fever, along with the principles of Epidemiology.

4. The less known fevers of tropical and subtropical regions.

5. The more important parasitic maladies—Filariasis, Ankylostomiasis, Bilharzia disease, &c.

6. Climatology and tropical Hygiene.

*Text-Book.*—Davidson's "Hygiene and Diseases of Warm Climates."

The dates of commencement and hours of the Lectures for the Winter and Summer Sessions will be announced later.

## Graduation in Medicine and Surgery.

### A.—REGULATIONS APPLICABLE TO ALL WHO BEGIN MEDICAL STUDIES AFTER 1ST OCTOBER 1892.

*For those who began Medical Studies before 1st October 1892, see Abridged Regulations B, page 402.*

I. Four Degrees in Medicine and Surgery are conferred by the University of Edinburgh, viz., Bachelor of Medicine (M.B.), Bachelor of Surgery (Ch.B.), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.). The Degree of Ch.B. is not conferred on any person who does not at the same time obtain the Degree of M.B., and the Degree of M.B. is not conferred on any person who does not at the same time obtain the Degree of Ch.B.

[These Degrees admit to the Medical Register. They qualify for Practice throughout His Majesty's dominions, and for admission to the Naval, Military, and other Public Medical Services in the United Kingdom.]

II. Subject to Regulations to be made from time to time by the University Court, the University may also confer Diplomas in Special Branches of Medical and Surgical Practice on Graduates of the University in Medicine and Surgery.

[A University certificate is granted, on certain conditions, in Diseases of Tropical Climates. See page 406.]

### PRELIMINARY EXAMINATION.<sup>1</sup>

III. Before commencing medical studies, each student must pass a Preliminary Examination in (1) English, (2) Latin, (3) Elementary Mathematics, and (4) Greek or French or German: Provided always that, in the case of a candidate whose native language is not English,

<sup>1</sup> See also pages 452 and 453, and Regulations for Registration of Medical Students page 388.



an examination in the native language of the candidate<sup>1</sup> may be substituted for one in either French or German, and an examination in any other classical language<sup>1</sup> for one in Latin or Greek.

IV. The extent and standard of the Preliminary Examination is determined by the Joint Board of Examiners constituted under Ordinance, No. 13 [General, No. 8 Regulations as to Examinations], in accordance with the terms of that Ordinance.

V. The Preliminary Examination is conducted in accordance with the provisions of Ordinance No. 13 [General, No. 8 Regulations as to Examinations];—and, subject to the provisions of the immediately succeeding section hereof, a Candidate shall be obliged to pass in all the required subjects at one or not more than two Examinations; provided that he may offer himself for re-examination as often as may be necessary to satisfy this condition.

VI. A Degree in Arts, or in Science (not being a Degree *honoris causa tantum*), in any of the Universities of the United Kingdom, or in any Colonial<sup>2</sup> or Foreign University specially recognised for the purpose by the University Court, exempts from the Preliminary Examination; and the Joint Board of Examiners appointed under the provisions of Ordinance, General, No. 8 [Regulations as to Examinations], has power to determine what examinations, other than those for the degrees hereinbefore mentioned, shall be accepted either in whole or in part in place of the Preliminary Examination.<sup>3</sup>

#### PROFESSIONAL EDUCATION.<sup>4</sup>

VII. Candidates are admitted to the Degrees of M.B. and Ch.B. only after they have fulfilled the following conditions:—

1. The Candidate must have been engaged in Medical study for at least five years.
2. In each of the first four years the Candidate must have attended at least two courses of instruction, in one or more of the subjects of study specified in sub section 4 hereof—each Course extending over a session of not less than five months, either continuous or divided into two terms; or, alternatively, one such Course, along with two Courses, each extending over a session of not less than two and a half months.
3. During the fifth or final year the Candidate must be engaged in

<sup>1</sup> Candidates who propose to be examined in a language other than those above-named are required to give intimation thereof before 1st February or 1st July for the Examinations in spring and autumn respectively.

<sup>2</sup> University recognised in terms of this section: Princeton, New Jersey, U.S.A.

<sup>3</sup> See page 453.

<sup>4</sup> No Course of Lectures will be allowed to qualify unless the Lecturer certifies that it has embraced at least 100 Lectures, or 50 Lectures, in conformity with the requirements of this section. Three Months' Courses on Materia Medica, Pathology and Midwifery do not qualify unless, in the case of Midwifery, they conform to the Regulation on p. 374. Apprenticeship, Dispensary or Hospital Practice, Practical Midwifery, and Vaccination, &c., are not reckoned as *Classes* in making up an *Annus Medicus*.

Clinical study for at least nine months at the Royal Infirmary, Edinburgh, or at one or more of such Public Hospitals or Dispensaries, British or Foreign, as may be recognised for the purpose by the University Court.

4. The Candidate must, during his Curriculum, have attended a Course or Courses of instruction in each of the following subjects of study, including such Examinations as may be prescribed in the various Classes, viz. :—

(1.) ANATOMY, . . . . .	{ During a Course of not less than Five Months.
(2.) PRACTICAL ANATOMY, . . . . .	{ During two Courses of not less than Five Months each. <sup>1</sup>
(3.) CHEMISTRY, . . . . .	{
(4.) MATERIA MEDICA and THERAPEUTICS, . . . . .	
(5.) PHYSIOLOGY or INSTITUTES OF MEDICINE, . . . . .	
(6.) PRACTICE OF MEDICINE, . . . . .	
(7.) SURGERY, . . . . .	
(8.) MIDWIFERY, and the DISEASES peculiar to WOMEN and INFANTS. Two Courses of Midwifery, of Three Months each, provided different departments of Obstetric Medicine be taught in each of the Courses, are reckoned equivalent to a Course of not less than Five Months, . . . . .	{ During Courses of not less than Five Months.
(9.) PATHOLOGY, . . . . .	{
(10.) PRACTICAL CHEMISTRY, . . . . .	
(11.) PHYSICS (including the DYNAMICS OF SOLIDS, LIQUIDS, and GASES, and the RUDIMENTS OF SOUND, HEAT, LIGHT, and ELECTRICITY), . . . . .	
(12.) ELEMENTARY BOTANY, . . . . .	
(13.) ELEMENTARY ZOOLOGY, . . . . .	
(14.) PRACTICAL PHYSIOLOGY, <sup>2</sup> . . . . .	{ During Courses of not less than Two and a half Months.
(15.) PRACTICAL PATHOLOGY, . . . . .	
(16.) FORENSIC MEDICINE, . . . . .	
(17.) PUBLIC HEALTH, . . . . .	Thirty Lectures.

<sup>1</sup> Certificates of attendance on Practical Anatomy must express not only the number of months engaged in dissection, but the names of the parts dissected, and the degree of care with which the dissections have been made. Students are recommended not to appear for Examination in Anatomy, with a view to a Degree, until they have dissected the human body at least once.

<sup>2</sup> For students commencing medical study after September 1899 certificates of attendance on Practical Physiology must bear that the course of instruction included (a) Practical Experimental Physiology, (b) Practical Chemical Physiology, and (c) Practical Histology, or separate certificates must be presented, covering each of these parts of the course.

Provided always in so far as regards the University of Edinburgh that—

(a) It is the duty of the Senatus to determine from time to time the number of meetings of which such Courses shall consist, and in what cases two half Courses shall be deemed equivalent to a full Course; and to report the determination to the University Court for its approval.

(b) It is the duty of the Professors and Lecturers to submit to the Senatus annually at the end of the Winter Session a scheme specifying what proportion of the Courses shall be devoted to Lectures, Practical Demonstrations, Examinations, and Tutorial Work respectively. The Senatus must transmit such scheme, with such observations as it may think fit to make thereon, to the University Court for its approval.

(c) The University Court will not grant or continue recognition to any institutions or teachers unless it is satisfied that their Courses of Instruction are equivalent to the Courses sanctioned in the Universities of Scotland.

5. The Candidate must have attended for at least three years the Medical and Surgical Practice either of the Royal Infirmary, Edinburgh, or of a General Hospital elsewhere, which accommodates not fewer than eighty patients, and possesses a distinct staff of Physicians and Surgeons, and is recognised for the purpose by the University Court.
6. The Candidate must have attended Clinical Surgery<sup>1</sup> during a Course or Courses extending over not less than nine months. These Courses may be conducted by the Professor of Clinical Surgery, or by Professors or Lecturers appointed for the purpose by the University Court, or by the Ordinary Surgeons of the Royal Infirmary, Edinburgh, or of a General Hospital defined and recognised as hereinbefore provided, and must consist of regular instruction at the bedside, along with Clinical Lectures.
7. The Candidate must have attended Clinical Medicine<sup>1</sup> during a Course or Courses extending over not less than nine months. These Courses may be conducted by Professors of the University, or by Lecturers appointed for the purpose by the University Court, or by the Ordinary Physicians of the Royal Infirmary, Edinburgh, or of a General Hospital defined and recognised as hereinbefore provided, and must consist of regular instruction at the bedside, along with Clinical Lectures.
8. The Candidate must have attended a course of instruction in Mental Diseases, of such duration, and so apportioned between lectures, demonstrations, and clinical instruction, as the Senatus, with the approval of the University Court, may from time to

<sup>1</sup> Only open to Students holding the Hospital Ticket. Certificates of attendance must be countersigned by the Treasurer of the Royal Infirmary. Attendance at these Classes includes attendance at the Ward Cliniques as well as the Class Lectures.

time determine. [The course of instruction in Mental Diseases must have been given by the University Lecturer, or by a recognised Teacher, and must consist of not less than six Class-room meetings for lectures and demonstrations and ten meetings in the Wards of a recognised Asylum for the Insane.<sup>1</sup>]

9. The Candidate must have attended a Course of twenty-five meetings on Practical Pharmacy in a University or recognised School of Medicine, or have dispensed drugs for a period of three months in an Hospital or Dispensary, or the establishment of any chemist and druggist or pharmaceutical chemist of Great Britain, or any pharmaceutical chemist of Ireland, who is registered in the Books of the Pharmaceutical Society of Great Britain or of the Pharmaceutical Society of Ireland respectively.
10. The Candidate must have attended, for at least six months, by apprenticeship or otherwise, the out-practice of an Hospital, or the practice of a Dispensary, or of a Physician or Surgeon, or of a Member of the London or Dublin Society of Apothecaries. He must have acted as Clerk<sup>2</sup> in the Medical and Dresser<sup>2</sup> in the Surgical Wards of a Public Hospital; and must also have availed himself, to such an extent as may be required by the Senatus, with the approval of the University Court, of opportunities of studying, at an Hospital or Dispensary, *post-mortem* Examinations, Fevers, Diseases of Children, Ophthalmology, or such other special departments as may from time to time be determined. [The approved courses are:—*A.* (1) *Post-Mortem Examinations*<sup>3</sup> in a recognised Hospital for a period of at least three months, during which practical instruction is given in the methods of making *Post-Mortem Examinations*, and in framing Reports.<sup>1</sup> (2) A course of Clinical instruction in infective Fevers, given at not less than twelve meetings in the Wards of a recognised Hospital where Clinical instruction is given on cases of Infectious Diseases.<sup>1</sup> (3) A course of instruction in Diseases of the Eye, given by the University Lecturer, or by a recognised Teacher, at not less than twelve Class-room meetings and twelve meetings for Clinical instruction in the Wards of a recognised Hospital, or in the Wards of a Hospital, and in a Dispensary, both recognised for the purpose. The Course to include efficient practical instruction in the methods of Examining the Eye.<sup>1</sup> (4) A Course of Operative Surgery, conducted by the Professor of Surgery in the University, or by a recognised Teacher. *B.* Every Candidate shall also be required to attend any one of the three following courses:—(1) A course of

<sup>1</sup> Must be attended before the Candidate enters for the Final Examination.

<sup>2</sup> For six months. Must be members of the Class of Clinical Surgery, or of Clinical Medicine as the case may be. See also footnote, p. 375.

<sup>3</sup> See footnote, page 375.

Clinical instruction in the Diseases of Children, given by the University Lecturers, and by recognised Teachers in the Edinburgh Royal Hospital for Sick Children, or by a recognised Teacher or Teachers in a Hospital recognised for the purpose, which shall extend over a period of at least six weeks, and in addition to the opportunities for Surgical and for other Medical instruction afforded by the Hospital, shall include Clinical instruction in the Medical diseases of children, consisting of not less than four Class-room lectures, ten meetings for Clinical instruction in the Medical Wards, and four meetings in the Out-patient Department of the Hospital,<sup>1 2</sup> together with attendance at Post-Mortem Examinations.<sup>1 2</sup> (2) A course of instruction in diseases of the Larynx, Ear, and Nose, given by a University Lecturer,<sup>1 2</sup> or by a recognised Teacher, at not less than six Class-room meetings, and twelve meetings for Clinical instruction in the Wards of a recognised Hospital, or in the Wards of a Hospital and in a Dispensary, both recognised for the purpose.<sup>1 2</sup> (3) A course of clinical instruction in diseases of the Skin, given by a University Lecturer, or by a recognised teacher, at not less than Twenty meetings in the wards of a recognised Hospital, or in the wards of a Hospital and in a Dispensary both recognised for the purpose.<sup>1 2</sup>

11. The Candidate must have attended, under the superintendence of a registered Medical Practitioner, twelve cases of labour, or such additional number as the Senatus, with the sanction of the University Court, may from time to time determine; or have attended for three months the practice of a Lying-in Hospital, or of the Maternity Department of a General Hospital or other Public Charitable Institution, and have conducted personally six, or such an additional number of cases of labour as the Senatus, with the approval of the University Court, may from time to time determine.
12. The Candidate must have been properly instructed in Vaccination at a Public Vaccination Station, by a Public Vaccinator, authorised by the proper Government Authority to grant Certificates of Proficiency in Vaccination.<sup>3</sup>
13. No Candidate for a degree will be deemed to have attended a class as part of the Curriculum necessary for that degree who

<sup>1</sup> See footnote, page 375.

<sup>2</sup> See footnote 1, page 376.

<sup>3</sup> The Candidate must, when he enters for the Final Examination, produce a certificate from a Vaccine Department in an Hospital, Dispensary, or other public Institution recognised by the Local Government Board for instruction in Vaccination, to the effect that he has himself performed the operation successfully under the teacher's inspection; that he is familiar with the different stages of the vaccine vesicle, and with the method of preserving lymph, and is thoroughly informed in every necessary part of the subject. The recognised Vaccine Departments in Edinburgh are the Royal Public Dispensary, 21 West Richmond Street—*Vaccinator*, Dr Husband; the Western Dispensary, 90 Fountainbridge—*Vaccinator*, Dr J. B. Buist; and the New Town Dispensary, 17 Thistle Street—*Vaccinator*, Dr CadeH.



does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

VIII. With respect to the Places and Institutions at which the studies of the Candidate may be prosecuted, the following Regulations have effect :—

1. Two of the five years of medical study must be spent in the University of Edinburgh, each year of study including always the attendances specified in section VII., sub-section 2.
2. The remaining three years may be spent in any University of the United Kingdom, or in any Indian, Colonial, or Foreign University recognised for the purpose by the University Court, or in such Medical Schools or under such Teachers as may be recognised for the purpose by the University Court, each year of study during the first four years including always the attendances specified in section VII., sub-section 2.<sup>1</sup>
3. Of the subjects of study specified in section VII., sub-section 4, not less than eight must be taken in the University of Edinburgh, or (subject always to the provisions as to attendance contained in the immediately preceding sub-sections) in some other University of the United Kingdom, or in some Foreign or Colonial University entitled to confer the Degree of Doctor of Medicine, recognised for the purpose by the University Court, or in a College incorporated with, or affiliated to a University, entitled to confer the Degree of Doctor of Medicine, recognised for the purpose by the University Court : Provided always that where in any of said subjects of study two or more Courses are required, the taking of one of those Courses will constitute a taking of the subject for the purpose of this sub-section.
4. The remainder of such subjects of study may (subject always as aforesaid) be taken in such Medical Schools or under such Teachers as may be recognised for the purpose by the University Court.
5. All Candidates, not Matriculated Students of the University, availing themselves of the permission to attend the Lectures of Extra-Academical Teachers in Edinburgh, must, at the commencement of each year of such attendance, enrol their names in a book to be kept in the University for that purpose, paying a Fee of the same amount as the Matriculation Fee paid by Students of the University, and having, in respect of such payment, a right to the use of the Library of the University.
6. The Fee for attendance, for purposes of graduation, on the Courses of instruction of recognised Extra-Academical Teachers

<sup>1</sup> Universities recognised under this sub-section.—All Indian, Colonial, or foreign Universities whose Courses of Instruction were accepted for purposes of graduation in Medicine under the old Ordinances.



in Edinburgh, must be not less than the amount exigible for the corresponding Courses in the University.

*[The fee must be paid at the commencement of the Course, and the Certificate must state the amount of the fee paid.]*

7. The University Court will not recognise as qualifying for examination in any of the subjects specified in section VII., sub-section 4, the class of any teacher who is at the time a teacher of more than one of the said subjects, except in those cases where Professors in the University are at liberty to teach the two subjects: Provided always that a Professor or other Teacher in any endowed public College or Institution, who, by the terms of his appointment, is required to teach more than one subject of Medical Study therein, may be recognised under sub-section 2 of this section as a Teacher of any one of the subjects which he teaches.
8. A Teacher, attendance on whose course of instruction, before the date of the approval of these Regulations by Her Majesty in Council, had been recognised for the purposes of graduation in the University, is not required to obtain a new recognition from the University Court; and attendance on the course of instruction of every such Teacher may continue to be recognised as heretofore.
9. It is in the power of the University Court, if it sees cause, at any time to withdraw or suspend any recognition which it may have granted.

IX. In the University of Edinburgh it is the duty of the Professors of the subjects specified in section VII., sub-section 4 hereof (except Practical Anatomy and such other subjects as the Senatus, with the approval of the University Court, may from time to time determine), so to conduct the Courses that Students may receive instruction sufficient for graduation in any one of the said subjects by attendance on one Course of five or six months, or of two and a half or three months as the case may be.

X. If any Candidate, before presenting himself for his Preliminary Examination, has attended in any University of the United Kingdom, or in any University or Institution specially approved, or under any Teacher specially recognised for the purpose by the University Court, a Course or Courses of instruction in Physics, Chemistry, Botany, or Zoology, equivalent in the judgment of the Senatus to the qualifying Course in the same subject in the University of Edinburgh, such attendance will (notwithstanding anything hereinbefore stipulated) be held as entitling him to be examined in these subjects; and if the Candidate has attended such Course or Courses in each of the said subjects, he will be held to have completed his first year of Medical Study: Provided always that the evidence of such attendance at such equivalent Course or Courses must be presented to the Senatus at the time when the Candidate presents himself for his Preliminary

Examination; and the Senatus will, if satisfied, grant a certificate to that effect.

By a Supplementary Ordinance of the Commissioners, the provisions of this section shall not have effect except where the University Court shall allow the application after a report by the Senatus, setting forth special grounds therefor.

#### PROFESSIONAL EXAMINATION FOR M.B. AND Ch.B.

XI. Each Candidate is examined, both in writing and orally, and also clinically where the nature of the subject admits, in the following divisions, viz. :—*First*, in Botany, Zoology, Physics, and Chemistry; *Second*, in Anatomy, Physiology, and Materia Medica and Therapeutics; *Third*, in Pathology; *Fourth*, in Surgery and Clinical Surgery, Practice of Medicine and Clinical Medicine, Midwifery, Forensic Medicine, and Public Health.

In subjects which admit of practical instruction, the examination will be such as to test the practical acquirements of the Candidate.

If a Candidate for the Degrees of M.B. and Ch.B. have completed, in a University of the United Kingdom, a course of study and passed an examination in Botany, Zoology, Physics, or Chemistry qualifying for a Degree in Science or in Arts, he shall be held to have passed the examinations in such subject or subjects.

If a Candidate have obtained a Degree in Science or in Arts in any University other than a University of the United Kingdom, granted in either case after a course of study and an examination in Botany, Zoology, Physics, or Chemistry, it shall be in the power of the University Court to exempt such Candidate from the examinations in such subject or subjects; provided that the course of study and the standard of examination in each case are satisfactory in the judgment of the Senatus Academicus.<sup>1</sup>

XII. Candidates who profess themselves ready to submit to an examination in the subjects comprised in the first division, viz., Botany, Zoology, Physics, and Chemistry, may be admitted to examination in all or any two of these subjects at any examination held after they have attended a full Course in each of the subjects professed.

XIII. Candidates who have passed their examinations in the subjects comprised in the first division may be admitted to examination in the second division at the end of the third winter session.

Provided that Candidates who so desire may postpone their examination in Materia Medica and Therapeutics until the close of the summer session following.

XIV. Candidates who have passed their examinations in the subjects comprised in the first and second divisions may be admitted to examination in the third division at the end of the fourth winter session.

<sup>1</sup> Universities recognised under this section—  
University of New Zealand.  
University of Wisconsin.

XV. Candidates who have passed their examinations in the subjects comprised in the first, second, and third divisions may be admitted to examination in the fourth or final division, when they have completed the fifth year of study.

XVI. If any Candidate at these examinations be found unqualified in one or more subjects, he will not again be admitted to examination unless he has pursued his medical studies for such time, and subject to such conditions, as the Faculty of Medicine may prescribe.<sup>1</sup>

XVII. If any Candidate at these examinations be found to have passed in one or more subjects with sufficient merit, he will not be liable to re-examination in such subject or subjects, although he may have been found unqualified in a subject or subjects comprised in the same division as hereinbefore specified.

XVIII. Every Candidate must deliver,<sup>2</sup> on or before such day as the Senatus may from time to time determine, to the Dean of the Faculty of Medicine, a declaration, in his own handwriting, that he has completed his twenty-first year, or that he will have completed it on or before the day of graduation, and that he will not be, on the day of graduation, under articles of apprenticeship to any surgeon or other master.

XIX. After the Candidate has satisfied the Examiners, the Dean of the Faculty of Medicine lays the proceedings before the Senatus, by whose authority the Candidate will be admitted, on such day as the Senatus may from time to time appoint, to the Degrees of M.B. and Ch.B., on payment of the required fees.

XX. Candidates for graduation must produce evidence of their having conformed to the Regulations which were in force at the time they commenced their Medical Studies.

### PROFESSIONAL EXAMINATION FOR M.D.<sup>3</sup>

XXI. 1. Subject to the conditions hereinafter specified, the Degree of M.D. is conferred on any Candidate who has obtained the Degrees of M.B. and Ch.B., and is of the age of twenty-four years or upwards, and has produced a certificate of having been engaged, subsequently to having received the Degrees of

<sup>1</sup> Satisfactory Certificates must be produced when Candidates re-enter for Examination, the fees paid to Extra-Academical teachers in Edinburgh for re-attendances must be of the same amount as those payable for the corresponding classes in the University, and the Certificates of attendance must show the amount of the fees paid.

<sup>2</sup> On or before the date for lodging Certificates, &c., for the fourth division of the Examinations. See page 397. A declaration is appended to the Schedule for the Final Examination, which must be attested and signed before the Schedule is lodged.

<sup>3</sup> Candidates, settled for a period of years in foreign parts, who have complied with all the regulations for the Degree of M.D. or for the Degree of Ch.M., but who cannot appear personally to receive the Degree, may, on satisfying the Senatus to that effect, by production of sufficient official testimonials, have the Degree conferred on them in absence.

M.B. and Ch.B., for at least one year in attendance in the Medical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Military or Naval Medical Services, or for at least two years in Practice other than Practice restricted to Surgery.

2. Each Candidate for the Degree of M.D. is required to pass an examination in Clinical Medicine and in such of its special departments as may from time to time be determined; and he may present himself for examination in Clinical Medicine at any period of examination subsequent to one year after he has received the Degrees of Bachelor of Medicine and Bachelor of Surgery.

This Examination in Clinical Medicine for each Candidate consists of a written Report and Commentary, with any oral questions that may be considered desirable, upon at least three Medical cases. In the selection of the cases, special regard should be given to the opportunities they afford for testing the Candidate, not only in the ordinary methods of clinical investigation, but also in the more advanced methods requiring practical knowledge in the applications of the ophthalmoscope and laryngoscope, in the chemical and microscopical examination of excreta, the quantitative determination and microscopic characters of the chief constituents of blood possessing clinical importance, the recording by instruments of the condition of the circulation, the applications of electricity, &c. : Provided always that one of the three cases on which a Candidate shall be examined may be the case of a patient suffering from a Gynecological or Mental Disease, or Disease of Childhood, if the Candidate on entering his name for the Examination declare a wish to this effect. So far as possible, the Examination in these Departments will be on a standard equal to that of the Examination on the Medical cases.

3. Each Candidate for the Degree of M.D. must submit for the approval of the Faculty of Medicine a Thesis, on any branch of knowledge comprised in the second, third, or fourth examinations for the Degrees of M.B. and Ch.B., which he may have made a subject of study after having received those Degrees, excepting subjects which are exclusively Surgical; and the Thesis, accompanied by a declaration signed by the Candidate, that the work has been done and the Thesis composed by himself, must be lodged with the Dean of the Faculty of Medicine on or before a date to be fixed by the Senatus.<sup>1</sup>

<sup>1</sup> Candidates are required to write their Theses on faint lined paper, 11 in. by 8½ in. with margins 1½ in. at each side. The Thesis is to be written on one side of each leaf only, and it must be lodged on or before 30th April of the year in which the Candidate proposes to graduate. See also footnotes, pages 396 and 397.

4. A Bachelor of Medicine and Bachelor of Surgery, who produces to the Senatus satisfactory evidence of his intention of entering within twelve months after obtaining such degrees on the practice of his profession in a British Possession or Colony, or in a foreign Country, may, under Regulations to be framed by the Senatus, be admitted to the examination in Clinical Medicine at any period of examination after he has received such Degrees ; but the Degree of M.D. will not be conferred on him unless he produces a certificate that, subsequently to having received the Degrees of M.B. and Ch.B., he has been engaged for at least one year in attendance in the Medical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Naval or Military Medical Services, or for at least two years in Practice which has not been exclusively surgical, and unless his Thesis, in the judgment of the Faculty of Medicine, is of exceptional merit.

Bachelors of Medicine and Masters of Surgery of the University of Edinburgh, who have graduated under the regulations in force before 5th August 1892, may proceed to the Degree of Doctor of Medicine under the provisions of this section in the same manner as if they had graduated under the new Regulations.

#### PROFESSIONAL EXAMINATION FOR CH.M.<sup>1</sup>

- XXII. 1. Subject to the conditions hereinafter specified the Degree of Ch.M. will be conferred on any Candidate who has obtained the Degrees of M.B. and Ch.B. of the University, and is of the age of twenty-four years or upwards, and has produced a certificate of having been engaged, subsequently to his having received the Degrees of M.B. and Ch.B., for at least one year in attendance in the Surgical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Military or Naval Medical Services, or for at least two years in practice other than practice restricted to Medicine.
2. Each Candidate for the Degree of Ch.M. is required to pass an examination in the following subjects :—Surgical Anatomy, Operations upon the dead body, and Clinical Surgery, and in such of the special departments of Clinical Surgery as may from time to time be determined ; and he may present himself for examination in these subjects at any period of examination subsequent to one year after he has received the Degrees of M.B. and Ch.B.

<sup>1</sup> See footnote 3, page 381.



The Examination in Clinical Surgery for the Degree of Master of Surgery should for each Candidate consist of a written Report and Commentary, with any oral questions that may be considered desirable, on at least three Surgical cases: Provided that one of the three Surgical cases on which a Candidate shall be examined may be the case of a patient suffering from an Eye, Throat, Ear, or Gynecological Disease, if the Candidate on entering his name for the Examination declare a wish to this effect. So far as possible, the Examination in these Departments shall be on a standard equal to that of the Examination on the Surgical cases. The Candidates shall also be examined in Surgical Anatomy and Operations upon the dead body.

3. Each Candidate for the Degree of Ch.M. must submit, for the approval of the Faculty of Medicine, a Thesis on any branch of knowledge comprised in the second, third, or fourth Examinations for the Degrees of M.B. and Ch.B., which he may have made a subject of study after having received those Degrees, excepting subjects that are exclusively medical; and the Thesis, accompanied by a declaration signed by the Candidate that the work has been done and the Thesis composed by himself, must be lodged with the Dean of the Faculty of Medicine on or before a date to be fixed by the Senatus.<sup>1</sup>
4. A Bachelor of Medicine and Bachelor of Surgery who produces to the Senatus satisfactory evidence of his intention of entering within twelve months after obtaining such Degrees on the practice of his profession in a British Possession or Colony, or in a foreign Country, may, under Regulations to be framed by the Senatus, be admitted to examination in the subjects specified in sub-section 2 of this section at any period of examination after he has received such Degrees; but the Degree of Ch.M. shall not be conferred on him unless he produces a certificate that, subsequently to having received the Degrees of M.B. and Ch.B., he has been engaged for at least one year in attendance in the Surgical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Naval or Military Medical Services, or for at least two years in Practice which has not been exclusively medical, and unless his Thesis in the judgment of the Faculty of Medicine is of exceptional merit.

#### REGULATIONS FOR GRADUATION OF WOMEN.

1. It shall be in the power of the University Court to admit Women to graduation.
2. The conditions for graduation shall be the same for women as for men, subject to the following modifications, which shall have effect

<sup>1</sup> See footnote 3, page 381, and footnote, page 382.



until provision is made for the instruction of women in all the subjects qualifying for graduation, in which provision is made for the instruction of men.

3. Section VIII. of Regulations for Degrees in Medicine shall not be applicable to the graduation of women in Medicine.

So long as within the Faculty provision is not made for the instruction of women in any subject qualifying for graduation in which provision is made for the instruction of men, it shall be in the power of the University Court to admit to graduation women who have received the requisite instruction in that subject in any University of the United Kingdom, or in any Indian, Colonial, or Foreign University recognised for the purpose by the University Court, or in such Medical Schools or under such teachers as may be recognised for the purpose by the University Court : Provided always that every Candidate for graduation shall produce evidence of having satisfied the conditions laid down in the Regulations for Degrees in Medicine with respect to the Preliminary Examination, and shall be examined in all the subjects necessary for graduation by the Examiners of the University.

4. So soon as within the University provision is made for the instruction of women in all subjects qualifying for graduation in which provision is made for the instruction of men, the conditions for the graduation of women shall be the same as the conditions for the graduation of men.

5. In the case of women who began their studies before these Regulations came into operation, it shall be competent to the University Court to admit to graduation in Medicine women who may complete their medical studies in accordance either with the Regulations for graduation hitherto in force, or with the present Regulations ; declaring that as regards their studies prior to the date at which these Regulations came into operation (1st October 1892), such women may have obtained their instruction in any classes which the University Court may accept for the purpose, and providing that before beginning their medical studies they shall have passed a Preliminary Examination which the University Court shall consider to have been adequate.

6. Women who attend classes in the University must matriculate, paying a fee of the same amount as that exigible for other students. Women, who are Candidates for graduation but not matriculated students, and who may attend classes in Edinburgh under the provisions above set forth, must, at the commencement of each year of such attendance, enrol their names in a book to be kept in the University for that purpose, paying a Fee of the same amount as the Matriculation Fee paid by students of the University [and having, in respect of such payment, a right to the use of the Library of the University].

#### ADDITIONAL REGULATIONS OF THE UNIVERSITY COURT.

When granting recognition to Medical Schools or Teachers for the medical instruction of women, the University Court requires that the classes shall not be mixed classes, except on special cause shown.

The University Court have recognised the Medical College for Women, 30 Chambers Street, Edinburgh, as a Medical School whose courses of instruction qualify for graduation in Medicine, subject to the following conditions:—Provided 1. That every Candidate for graduation shall produce evidence of having satisfied the conditions with respect to the Preliminary Examination and Registration as Medical Students, and shall be examined in all the subjects necessary for graduation by the Examiners of the University in which she takes her degree. 2. . . . 3. . . . 4. . . . 5. That the aforesaid School make application annually to the University Court for a continuation of the recognition thus granted, and at the same time report to the Court on the administrative arrangements and discipline of the School. 6. That schedules of Class Returns, to be furnished by the Court, and giving the designation of the class or course, number of students, number of meetings, &c., be filled up by each of the teachers of the qualifying classes or courses of instruction in the aforesaid Schools, as in the case of the recognised Lecturers on Medicine, and forwarded to the Secretary of the Court not later than 1st July in each year. 7. That all advertisements referring to the recognition of the aforesaid School, or to the qualifying classes or courses of instruction to be given at any time in connection with this School, shall, before publication, be submitted to the Secretary of Senatus of the University, and receive his approval.

#### DATES OF ENTERING FOR PRELIMINARY EXAMINATION AND FOR PAYMENT OF FEES.

Each Candidate is required to pay a fee of 10s. 6d. for each appearance at the Preliminary Examination.

Candidates for Examination may obtain Schedules at the Matriculation Office, University (Old) Buildings, on and after 9th September 1901, and on and after 15th February 1902. The Schedules must be completed and returned along with the fees not later than 18th September 1901 and 1st March 1902, for the autumn and spring Examinations respectively.

The Examinations are held in the Examination Hall, University (Old) Buildings, South Bridge, Edinburgh.

Candidates may pay the fees personally or transmit them to T. Gilbert, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts* crossed Union Bank of Scotland (High Street Branch), Edinburgh, but not by cheques on private accounts. When names are not entered and Fees paid on or before the stated dates, an additional or late entry fee of 10s. must be paid before the Candidate can be admitted to Examination. A Candidate is not held to have entered until his Schedule is lodged, the Fee paid, and a Pass to the Examination obtained.

TIME-TABLE FOR PRELIMINARY EXAMINATIONS FOR 1901-1902.

		Medical Preliminary Examinations.	Arts and Science Preliminary Examinations.
1901.			
Sept. 27	Fri.	English, 9-12 Latin, 3-6 <sup>2</sup>	English, 1st paper, 9-11 Higher Latin, 1st paper, 12-2 Lower Latin, 3-6
,, 28	Sat.	Higher Mathematics, 1st paper, 12-2 <sup>1</sup> Greek, 3-6 <sup>2</sup> Do., 3-5 <sup>1</sup>	English, 2nd paper, 9-11 Intermediate and Higher Mathematics, 12-2 Lower Greek, 3-6 Anglo - Saxon for Patterson Bursary, 9-12, 3-6
,, 30	Mon.	Higher Mathematics, 2nd paper, 12-2 <sup>1</sup> Mathematics, 3-6 <sup>2</sup>	Higher Latin, 2nd paper, 9-11 Intermediate and Higher Mathematics, 12-2 Lower Mathematics, 3-6
Oct. 1	Tu.	French, 12-3 Do., 12-2 <sup>1</sup> Mechanics, 3-6 <sup>1,3</sup>	Higher Greek, 1st paper, 9-11 French, 1st paper, 12-1.30 Dynamics, 3-6
,, 2	Wed.	German, 3-6 Do., 3-5 <sup>1</sup>	Higher Greek, 2nd paper, 9-11 French, 2nd paper, 12-2 German, 1st paper, 3-4.30
,, 3	Th.	Moral Philosophy, 9-11 <sup>1</sup>	German, 2nd paper, 9-11 Italian, 12-1.30
,, 4	Fri.	Natural Philosophy, 9-11 <sup>1</sup> Logic, 2-4 <sup>1</sup>	
1902.			
Jan. 28	Fri.	English, 9-12 Latin, 3-6 <sup>2</sup>	English, 1st paper, 9-11 Higher Latin, 1st paper, 12-2 Lower Latin, 3-6
,, 29	Sat.	Higher Mathematics, 1st paper, 12-2 <sup>1</sup> Greek, 3-6 <sup>2</sup> Do., 3-5 <sup>1</sup>	English, 2nd paper, 9-11 Intermediate and Higher Mathematics, 1st paper, 12-2 Lower Greek, 3-6
,, 31	Mon.	Higher Mathematics, 2nd paper, 12-2 <sup>1</sup> Mathematics, 3-6 <sup>2</sup>	Higher Latin, 2nd paper, 9-11 Intermediate and Higher Mathematics, 2nd paper, 12-2 Lower Mathematics, 3-6
April 1	Tu.	French, 12-3 Do., 12-2 <sup>1</sup> Mechanics, 3-6 <sup>1,3</sup>	Higher Greek, 1st paper, 9-11 French, 1st paper, 12-1.30 Dynamics, 3-6
,, 2	Wed.	German, 3-6 Do., 3-5 <sup>1</sup>	Higher Greek, 2nd paper, 9-11 French, 2nd paper, 12-2 German, 1st paper, 3-4.30
,, 3	Th.	Moral Philosophy, 9-11 <sup>1</sup>	German, 2nd paper, 9-11 Italian, 12-1.30, 3-5
,, 4	Fri.	Natural Philosophy, 9-11 <sup>1</sup> Logic, 2-4 <sup>1</sup>	

<sup>1</sup> For Students completing the Examination under the Old Regulations.

<sup>2</sup> Same as the Lower Standard Paper for Degrees in Arts and Science.

<sup>3</sup> Same as Dynamics for Degrees in Arts and Science.

# MINIMUM CURRICULUM FOR DEGREES OF M.B. AND CH.B., WITH SUGGESTED ORDER OF STUDY AND EXAMINATION.

Before beginning Medical Study, students must pass the Preliminary Examination in General Education, either at the University, or elsewhere, according to the requirements of the University. Immediately after entering on Medical Study, students must register in the books of one or other of the Registrars of the General Medical Council. The Registrar for Scotland is Mr James Robertson, 54 George Square, Edinburgh, from whom forms of Registration and all information on the subject may be obtained. *After 1901 Candidates for Registration must produce evidence that they have attained 16 years of age.*

Medical Study may be begun in October (Winter Session) or May (Summer Session), and must be engaged in for at least five years.

## A.—For Students beginning in Winter.

### FIRST WINTER SESSION.

Chemistry.

Practical Chemistry.

Physics.<sup>1</sup>

Anatomy.

*Examination in Chemistry, including Practical Chemistry, and Physics.*

### FIRST SUMMER SESSION.

Botany.

Zoology.

*Examination in Elementary Botany and Elementary Zoology.*

### SECOND WINTER SESSION.

Surgery.

Practical Anatomy.

Physiology.

Practical Physiology.

Hospital and Clinical Surgery *after Christmas.*

### SECOND SUMMER SESSION.

Practical Materia Medica.

Hospital and Clinical Surgery.

Practical Physiology.

Practical Anatomy.

### THIRD WINTER SESSION.

Anatomical Demonstrations.

Materia Medica.

Hospital and Clinical Surgery *up to Christmas.*

Practical Anatomy.

*Examination in Anatomy, Physiology, and Materia Medica and Therapeutics. (The last may be postponed to the end of the following summer.)*

### THIRD SUMMER SESSION.

Practical Pathology.

Hospital and Clinical Medicine.

*Examination in Materia Medica and Therapeutics (if not previously taken).*

### FOURTH WINTER SESSION.

Midwifery.

Pathology.

Hospital and Clinical Medicine.

Post-Mortems.

Medicine.

Dispensary.

*Examination in Pathology, Forensic Medicine, and Public Health.<sup>2</sup> (The latter may*

<sup>1</sup> Three months' course.

<sup>2</sup> After 1902 the Examinations in Forensic Medicine and in Public Health will be in the Final only.

*be postponed to the end of the following Summer.)*

FOURTH SUMMER SESSION.

Forensic Medicine.  
Public Health.  
Ophthalmology.  
Diseases of Children; or  
Larynx, Ear and Nose;  
or Skin.  
Hospital and Clinical Medicine  
Dispensary.  
Mental Diseases.

FIFTH WINTER SESSION.

Fevers.

Hospital and Clinical Medicine.

Vaccination.

Practical Midwifery.

SPRING VACATION AND FIFTH SUMMER SESSION.

Operative Surgery.

*Examination in Surgery and Clinical Surgery, Medicine and Clinical Medicine, Midwifery, and in Forensic Medicine, and Public Health, if not taken in the Third Professional Examination.<sup>2</sup>*

B.—For Students beginning in Summer.

FIRST SUMMER SESSION.

Botany.  
Zoology.  
*Examination in Elementary Botany and Zoology.*

FIRST WINTER SESSION.

Chemistry.  
Practical Chemistry.  
Physics.<sup>1</sup>  
Anatomy.  
*Examination in Chemistry, including Practical Chemistry and Physics.*

SECOND SUMMER SESSION.

Practical Anatomy.  
Practical Physiology (Histology).

SECOND WINTER SESSION.

Surgery.  
Practical Anatomy.  
Practical Physiology.  
Hospital and Clinical Surgery  
*after Christmas.*  
Physiology.

THIRD SUMMER SESSION.

Practical Materia Medica.  
Practical Anatomy.  
Hospital and Clinical Surgery.

THIRD WINTER SESSION.

Practical Anatomy.  
Anatomical Demonstrations.  
Hospital and Clinical Surgery  
*up to Christmas.*

Materia Medica.

*Examination in Anatomy, Physiology, and Materia Medica and Therapeutics. (The last may be postponed to the end of the following Summer.)*

FOURTH SUMMER SESSION.

Practical Pathology.  
Hospital and Clinical Medicine.  
Dispensary.

FOURTH WINTER SESSION.

Midwifery.  
Pathology.  
Hospital and Clinical Medicine.  
Post-mortems.  
Medicine.  
Dispensary.  
*Examination in Pathology, and Forensic Medicine and*

<sup>1</sup> Three months' course.

<sup>2</sup> See footnote 2, page 388.

*Public Health. (The latter may be postponed to the end of the following Summer Session.)*

#### FIFTH SUMMER SESSION.

Forensic Medicine.  
Public Health.  
Operative Surgery.  
Ophthalmology.  
Diseases of Children ; or,  
Larynx, Ear and Nose ; or  
Skin.  
Hospital and Clinical Medicine.

Mental Diseases.

#### FIFTH WINTER SESSION.

Fevers.  
Hospital and Clinical Medicine.  
Vaccination.  
Practical Midwifery.  
*Examination in Surgery and Clinical Surgery, Medicine and Clinical Medicine, Midwifery, and in Forensic Medicine, and Public Health, if not taken in the Third Professional Examination.*<sup>1</sup>

### REGULATIONS AS TO CLASS EXAMINATIONS.

With a view to promote the Educational interests of the students during the time they are occupied with the respective subjects in the Classes, the Senatus recommend :—

1. That there should be at least two Special Class-Examinations in the Classes in the Faculty of Medicine during each Session, conducted by means of questions and written answers, without aid from books or notes.

2. That in the event of a student gaining 75 per cent. or more of the available marks in any department, he shall obtain a Certificate in the First Class of Honours.

3. That in the event of a student gaining 50 per cent. or more, but less than 75 per cent., of the available marks in any department, he shall receive a Certificate in the Second Class of Honours.

University Bronze Medals are also given for Competitive Class Examinations.

### CERTIFICATES OF ATTENDANCE ON CLASSES IN THE FACULTY OF MEDICINE.

The Senatus Academicus have resolved that the Certificates of Attendance to be granted to students in the Faculty of Medicine shall be regulated in the following manner :—

Each Professor shall ascertain the presence of his pupils at least twenty-six times in a Course of six months' duration, and thirteen times in a Course of three months' duration.

Those who have been absent twelve or more times in a six months' Course, or six or more times in a three months' Course, or have not duly

<sup>1</sup> See footnote 2, page 388.



performed the work of the Class, including any Examinations that may be held, shall not be entitled to any Certificate.

The following is the form of Certificate which must be adopted in all cases :—

“I certify that Mr                      attended my Course of Instruction on                      during the Session                      ; that he was present on                      of the                      occasions on which attendance was ascertained ; and that he duly performed the work of the class.”

Exceptions will be admitted in the case of those who may be absent from sickness or other unavoidable causes, the particulars of which must be stated to the Professor in writing, accompanied with certificates. All excuses for non-attendance must be given in immediately upon the student returning to his class. If any student shall have been absent for six weeks or upwards in a Course of six months, or for three weeks in a Course of three months (whatever the cause of absence may be), his case must be transmitted to the Dean of the Faculty for the decision of the Faculty.

Whenever the student's cause for absence shall be admitted by the Professor or by the Faculty, the Certificate shall bear that he “attended,” and shall state the amount of the irregularity and the nature of the excuse.

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## FIRST PROFESSIONAL EXAMINATION.

The Faculty of Medicine have resolved that the written and oral examinations on Chemistry, Elementary Botany, Elementary Zoology, and Physics shall be restricted in the following manner :—

1. *Chemistry*.—Chemical changes as distinguished from physical changes. Elements ; compounds ; mixtures. Laws of chemical combination by weight and by volume. The atomic theory. Atoms ; molecules. Avogadro's Hypothesis. Molecular weights of gaseous and volatile substances. Atomic weights. Law of Dulong and Petit. Chemical Notation Symbols ; formulæ ; equations. Simple chemical calculations.

The non-metallic elements and their chief compounds ; especially the compounds of oxygen, of hydrogen, and of chlorine with the other non-metals. The more important inorganic acids. The atmosphere. Combustion. Oxidation and reduction.

The following metallic elements and their chief compounds ; especially those with oxygen, with chlorine, and with sulphur : Gold, platinum, silver, mercury, lead, antimony, tin, copper, bismuth, zinc, cadmium, iron, aluminium, chromium, manganese, barium, strontium, calcium, magnesium, potassium, sodium.

The following salts: the ammonium salts; the more important sulphates, sulphites, thiosulphates, nitrates, nitrites, carbonates, bromides, iodides, iodates, phosphates, borates, silicates.

The relations of bases, acids, and salts. Electrolysis. Quantivalence. The periodic law.

The metallurgy of silver, mercury, copper, lead, tin, zinc, iron (including cast-iron and steel). Alloys, such as brass, bronze, solder, type-metal. Amalgams.

The manufacture of aluminium, magnesium, potassium, sodium, glass, porcelain, mortar, gunpowder, sulphuric acid, sodium carbonate and bicarbonate, caustic soda, bleaching powder and chlorates, white lead.

Classification of Carbon Compounds. Marsh Gas and its Homologues. Chloroform. Methyl and Ethyl Alcohols and Ethers. Substituted ammonias and ammonium salts. Formic and Acetic Acids, Aldehyde, Acetone, Chloral, Olefiant Gas, Acetylene, Oxalic Acid, Lactic Acid. Tartaric Acid, Citric Acid. Fats and Oils, Saponification, Glycerine. Cellulose, Sugars, Starch. Distillation of Wood and of Coal. Benzene, Benzoic Acid, Phenol, Salicylic Acid, Oil of Bitter Almonds. Hydrocyanic Acid, Cyanides, Cyanates, Thiocyanates, Urea, Uric Acid.

*Practical Examination.*—(a) Simple inorganic preparations on a small scale, especially such as involve the formation and decomposition of the commoner salts.

(b) The qualitative examination of single substances. The substances given for examination may be:—Salts in solution; solid salts soluble in water; carbonates, sulphides, and oxides, insoluble in water but soluble in acids; metals. The salts given are confined to those derived from the metals and salt radicals named in the following lists:—

Silver, Mercurous, Mercuric, Cupric, Lead, Stannous, Cadmium, Bismuth, Antimony (*Tartar Emetic* may be given), Arsenious, Zinc, Manganous, Ferrous, Ferric, Chromic, Aluminium, Calcium, Barium, Strontium, Magnesium, Ammonium, Sodium, Potassium.

Carbonate, Sulphite, Thiosulphate, Sulphide, Hypochlorite (Bleaching solution), Nitrite, Chloride, Bromide, Iodide, Cyanide, Sulphate, Chromate, Orthophosphate, Arsenate, Arsenite, Borate, Oxalate, Nitrate, Chlorate, Acetate.

(c) Acidimetry and Alkalimetry.

(For further information see the *Practical Chemistry Class Book* "Salts and their Reactions," published by James Thin.

2. *Elementary Botany.*—The characteristic features of the following groups and classes of the vegetable kingdom:—

Thallophyta [Schizophyta, Algæ, Fungi]; Muscineæ [Hepaticæ, Musci]; Pteridophyta [Filicineæ, Equisetineæ, Lycopodineæ]; Phanerogamæ [Gymnospermæ, Angiospermæ (Monocotyledones, Dicotyledones)].

The fundamental facts and principles of Organography and Physiology. The characters of plants belonging to the following natural orders of Phanerogamæ:—Coniferæ, Gramineæ, Orchideæ, Liliaceæ, Urticaceæ, Labiata, Compositæ, Umbelliferæ, Rosaceæ, Leguminosæ, Cruciferæ, Ranunculaceæ.

3. *Elementary Zoology*.—An elementary knowledge of the Protozoa, Cœlenterata, Echinodermata, Annelida, Arthropoda, and Mollusca. A general knowledge of the structure and habits of the Pisces, Amphibia, Reptilia and Sauropsida, and of the structure, habits, and distribution of the Mammalia. The fundamental facts as to (1) the structure, &c., of the cell, (2) Sexual and Asexual Reproduction, (3) Heredity and Variation, (4) Maturation, Fertilisation, and Segmentation of the Ovum, (5) the Development of a Mammal, and (6) Parasitism and Degeneration.

4. *Physics*.—(a) Properties of Matter—including Inertia, Gravitation, Molecular Forces, &c.

(b) Abstract Dynamics—including Kinematics and Newton's Laws of Motion, with their consequences as regards Statics and Kinetics of Solid, Liquid, and Gaseous Bodies, with the Physical Measurement of Time.

(c) Sound and Wave-propagation in general, Intensity, Pitch and Quality of Musical Sounds, Harmonics, Concords, &c.

(d) Heat, its Nature, Effects, Measurement, Transference and Transformations—Measurement of Temperature and of absolute Temperature, Thermodynamics.

(e) Light (1), Geometrical Optics, Speed of Light, Laws of Reflection and Refraction, Construction and Effects of Mirrors, Prisms, Lenses, and Microscopes, Images, Conditions of Distinct Vision. (2) Physical Optics—Interference, Dispersion, Diffraction, Double Refraction, Polarisation, Spectrum Analysis.

(f) Electricity, including Frictional and Voltaic Electricity, Thermo- and Magneto-Electricity, Electro-Dynamics and Magnetism, with their practical applications. Measurements of Potential, Electromotive Force, Current, &c., Batteries, Dynamos, Electrometers, Galvanometers, Voltmeters, &c.

## HONOURS AT PROFESSIONAL EXAMINATIONS.

Candidates who have displayed special merit at any of the Professional Examinations will be announced as having passed that Examination "with distinction."

Candidates who have displayed special merit at each of the Professional Examinations will be announced, at the time of the Graduation, as having obtained FIRST or SECOND CLASS HONOURS, according to the merit that has been displayed.

## SPONSIO ACADEMICA FOR GRADUATES IN MEDICINE.

Ego Doctoratus in Arte Medica titulo jam donandus, sancte coram Deo cordium scrutatore, spondeo, me in omni grati animi officio erga Universitatem Academicam Edinburgensem ad extremum vitæ halitum perseveraturum.

Tum porro Artem Medicam caute, caste, probeque exercitaturum, et quoad potero, omnia ad ægrotorum corporum salutem conducentia cum fide procuraturum. Quæ, denique, inter medendum visa vel audita sileri conveniat, non sine gravi causa vulgaturum.

Ita præsens spondenti adsit Numen.

## FEES FOR EXAMINATIONS.

## FEES FOR M.B. AND CH.B.

Fee for the First Division of the Examination, viz., Botany, Zoology, Physics, and Chemistry . . .	£6 6 0
<i>or</i>	
For any two of the subjects . . .	£3 3 0
For the other two subjects . . .	3 3 0
For the Second Division, viz., Anatomy, Physiology, and Materia Medica and Therapeutics . . .	6 6 0
<i>or</i>	
For Anatomy and Physiology . . .	£4 4 0
For Materia Medica and Therapeutics . . .	2 2 0
For the Third Division, viz., Pathology . . .	4 4 0
For the Final Division, viz., Surgery and Clinical Surgery, Medicine and Clinical Medicine, Mid- wifery, Forensic Medicine, and Public Health . . .	6 6 0
	<u>£23 2 0</u>

Any Candidate who fails to pass in one or more of the subjects, must pay £1, 1s. for re-examination in each subject. (Surgery and Clinical Surgery count as two subjects, and Medicine and Clinical Medicine as two subjects.)

Candidates who, under the proviso in Section XI. of the Regulations, are exempted from the first division of the Examination, are required, after passing the final division of the Examination, to pay a fee of £6, 6s. before they can be admitted to the Degrees of M.B. and Ch.B.

Fee for M.D. . . . .	£10 10 0
Fee for Ch.M. . . . .	10 10 0

Any Candidate who fails to pass the Examinations for the Degree of M.D. or for the Degree of Ch.M., is required to pay a Fee of £5, 5s. for each re-appearance.

Every Candidate for Examination or Graduation must be a Matriculated Student of the year in which he appears for Examination or Graduation. He is also required before Graduation to pay the fee of

£1 for Registration as a Member of the General Council, if not already a Member.

### TIME-TABLES OF EXAMINATIONS.

*Candidates are required to enter for each periodical Professional Examination at which they desire to appear, and to state the subject or subjects in which they desire to be examined.*

The dates of the Examinations for 1901-1902 have been fixed as follows, and Candidates are required to assemble in the Examination Hall at the University a quarter of an hour before the time fixed for examination.

#### PRELIMINARY EXAMINATION.

See Time-Table and Dates of Entering, &c., pages 386 and 387.

### PROFESSIONAL EXAMINATIONS.

Candidates are required to enter their names and to pay the fees for the Examinations at the Matriculation Office, University (Old) Buildings, at the stated periods; and afterwards, at the stated periods, to exhibit their Certificates and Matriculation Cards at that Office. Certificates only will be received as evidence of attendance.

If names are not entered, Fees paid, and Certificates shown, or Theses lodged, on or before the stated dates (or a Pass obtained in the case of the fee having been previously paid), a late-entry fee of ten shillings must be paid before the Candidate can be admitted to any one of the Four Professional Examinations for M.B., or to the Professional Examinations for M.D. or Ch.M. Candidates may enter on payment of this fee till 4 P.M. on the third day previous to the commencement of the respective Examinations. Thereafter a late-entry fee of twenty shillings will be charged till twelve noon of the day preceding the commencement of any one of the Professional Examinations. No later entry will be received.

Theses for the degree of M.D. or Ch.M. will not be received after 30th April, unless with the Dean's permission, which permission will only be granted in special circumstances. A late-entry fee, as above, will be payable, and Theses so lodged will not be eligible for competition for medals or other awards.

If, after payment of the fee, a candidate withdraws his name, or fails to present himself at the examination, he will not receive back the fee, but will be allowed to enter on one subsequent occasion for examination in the same subject, without the payment of any additional fee.

#### FIRST PROFESSIONAL EXAMINATION.

This Examination takes place in March and July. Candidates may be admitted to Examination in all or in any two subjects, after they have attended a full course in each of the subjects professed.



## 396 *Graduation in Medicine—Dates of Examinations.*

1902.

Mar. 5. Wed. Names to be given in, and Fees paid, *on or before* this date.

„ 21. Fri. Certificates to be examined from 10 to 3.

### *Written Examinations.*<sup>1</sup>

„ 24. Mon. Chemistry at 10 o'clock ; Physics at 1 o'clock.

„ 25. Tu. Zoology at 10 o'clock ; Botany at 1 o'clock.

July 4. Fri. Names to be given in, and Fees paid *on or before* this date.

„ 16. Wed. Certificates to be examined from 10 to 3.

### *Written Examinations.*<sup>1</sup>

„ 18. Fri. Chemistry at 10 o'clock ; Physics at 1 o'clock.

„ 19. Sat. Zoology at 10 o'clock ; Botany at 1 o'clock.

### SECOND PROFESSIONAL EXAMINATION.<sup>1</sup>

This Examination takes place in March and July. Candidates who have passed the First Examination may be admitted to this Examination at the end of their Third Winter Session, on production of certificates of attendance on the Classes in the three subjects of this Examination.

Mar. 11. Tu. Names to be given in, and Fees paid *on or before* this date.

„ 22. Sat. Certificates to be examined from 10 to 1.

### *Written Examinations.*<sup>1</sup>

„ 26. Wed. Anatomy at 10 o'clock ; Physiology at 1 o'clock.

„ 27. Thur. Materia Medica and Therapeutics at 10 o'clock.

Candidates may postpone their Examination in Materia Medica and Therapeutics until the close of the Summer Session following.

July 11. Fri. Names to be given in, and Fees paid *on or before* this date.

„ 17. Thur. Certificates to be examined from 10 to 1.

### *Written Examination.*<sup>1</sup>

„ 21. Mon. Anatomy at 10 o'clock ; Physiology at 1 o'clock.

„ 22. Tues. Materia Medica and Therapeutics at 10 o'clock.

### THIRD PROFESSIONAL EXAMINATION.<sup>2</sup>

This Examination takes place in March and July, and Candidates who have passed the Second Examination may be admitted to this

<sup>1</sup> Lists of days and hours for the Oral Examinations, and for the Practical Chemistry Examination, will be posted at the University as soon as arranged.

<sup>2</sup> During 1902 the subjects of Forensic Medicine and Public Health may be taken either in the Third or Fourth Professional Examination.



Examination at the end of their Fourth Winter Session, on production of certificates of attendance on the Classes in the two subjects of this Examination.

1902.

- Mar. 15. Sat. Names to be given in, and Fees paid *on or before* this date.  
 „ 26. Wed. Certificates to be examined from 10 to 1.

*Written Examinations.*<sup>1</sup>

- „ 27. Thur. Pathology at 10 o'clock ; Forensic Medicine, 1 to 2.30 ; Public Health, 3 to 4.30.

Candidates may postpone their Examination in Forensic Medicine and Public Health until the close of the Summer Session following.

- July 16. Wed. Names to be given in and Fees paid *on or before* this date.  
 „ 22. Tu. Certificates to be examined from 10 to 1.

*Written Examination.*<sup>1</sup>

- „ 23. Wed. Pathology at 10 o'clock ; Forensic Medicine, 1 to 2.30 ; Public Health, 3 to 4.30.

FOURTH OR FINAL PROFESSIONAL EXAMINATION.<sup>2</sup>

This Examination takes place in May and June, and may be taken when the Candidate has passed the Third Examination, and has completed his Fifth year of Medical Study.

- April 17. Thur. Names to be given in and Fees paid *on or before* this date.  
 „ 22. Tu. }  
 „ 23. Wed. } Certificates to be examined from 10 to 1.

*Written Examinations.*<sup>1 2</sup>

- May 2. Fri. Clinical Medicine Examination begins.  
 „ 28. Wed. Clinical Surgery Examination begins.  
 June 16. Mon. Medicine at 10 o'clock ; Midwifery at 1 o'clock.  
 „ 17. Tu. Surgery at 10 o'clock ; Forensic Medicine, 1 to 2.30 ; Public Health, 3 to 4.30.

DEGREE OF DOCTOR OF MEDICINE.<sup>3</sup>

- April 30. Wed. Theses to be lodged, Certificates shown, and Fees paid *on or before* this date.

<sup>1</sup> See footnote 1, page 396.

<sup>2</sup> During 1902 the subjects of Forensic Medicine and Public Health may be taken either in the Third or Fourth Professional Examination.

<sup>3</sup> If Theses and Certificates are not lodged, or fees not paid, on or before the dates specified, a late-entry fee of 10s. will be charged. See also Regulations as to entering for Examinations, page 395.

## 398 *Graduation in Medicine—Dates of Examinations.*

1902.

### *Written Examinations.*<sup>1</sup>

- |      |     |      |  |
|------|-----|------|--|
| June | 20. | Fri. | Names to be entered and Fees paid by Candidates for Clinical Examination only <i>on or before</i> this date. |
| July | 4.  | Fri. | Clinical Medicine Examination begins at 9.45 A.M.  |

### DEGREE OF MASTER OF SURGERY.<sup>2</sup>

- |       |     |      |   |
|-------|-----|------|---|
| April | 30. | Wed. | Theses to be lodged, Certificates shown, and Fees paid <i>on or before</i> this date. |
|-------|-----|------|---|

### *Written Examinations.*<sup>1</sup>

- |      |     |       |  |
|------|-----|-------|--|
| June | 20. | Fri.  | Names to be entered and Fees paid by Candidates for Clinical Examination only <i>on or before</i> this date.                     |
| July | 4.  | Fri.  | Surgical Anatomy, Operations on the dead body. Clinical Surgery Examinations begin.  |
| „    | 17. | Thur. | Names to be given in for Graduation, and the Registration Fee (if not previously registered) paid <i>on or before</i> this date. |
| „    | 26. | Sat.  | GRADUATION CEREMONIAL at 10 A.M. Graduands to assemble at 8.30 A.M.  |

Information relative to Matriculation and the Curriculum of Study, and the Subjects of Examinations for Degrees in Medicine and Surgery, and for Fellowships, Scholarships, Bursaries, Prizes, &c., &c., may be obtained on application to the Dean of the Faculty of Medicine, University New Buildings.

The fees for Matriculation, for Examinations for Degrees, and for Registration as Member of the General Council of the University, are payable at the *Matriculation Office, University (Old) Buildings*. Candidates may pay the fees personally, or transmit them to T. GILBERT, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts*, crossed "*Union Bank of Scotland (High Street Branch), Edinburgh*," but not by cheques on private accounts. A Candidate is not held to be entered until his schedule is lodged, the fee paid, and a pass to the Examination obtained.

<sup>1</sup> See footnote 1, page 396.

<sup>2</sup> If Thesis and Certificates are not lodged, or fees not paid, on or before the dates specified, a late-entry fee of 10s. will be charged. See also Regulations as to entering for Examinations, page 395

# EXTRA-ACADEMICAL TEACHERS, WHOSE LECTURES QUALIFY FOR GRADUATION IN THIS UNIVERSITY.

## REGULATIONS OF THE UNIVERSITY COURT RELATIVE TO CERTIFICATES OF ATTENDANCE.

The Certificate of Attendance granted to Students by recognised Extra-Academical Teachers, should, in all cases, state the number of Lectures, or of Meetings for Practical Instruction, in the Course; the number of occasions on which attendance was ascertained; and the number of those occasions on which the Student was present, and in what further respects he duly performed the work of the class. The Certificate should also state the general scope of the Course; and, in particular, in the case of *Chemistry*, that the Course included Organic as well as Inorganic Chemistry; in the case of *Midwifery*, that it included the Diseases of Women and Children; and, in the case of *Practical Materia Medica*, that it included Pharmacognosy, Pharmacy, Dispensing, and the writing of Prescriptions.

### ABERYSTWYTH.

		<i>Date of Recognition.</i>
J. R. Ainsworth Davis, M.A.	Natural History,	28 July 1886.
D. Morgan Lewis	Physics,	16 July 1894.
J. H. Salter, B.Sc.	Botany,	30 Oct. 1893.

### BANGOR.

James J. Dobbie, D.Sc.,	{ Chemistry & Prac- tical Chemistry, }	30 May 1885.
Reginald W. Phillips, M.A.,	Botany,	30 May 1885.
Philip J. White, M.B.,	Natural History,	9 Dec. 1889.

### BELFAST.

R. O. Cunningham, M.D.,	Zoology,	18 Feb. 1895.
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### CARDIFF.

A. Francis Dixon, M.B.,	{ Anatomy & Prac- tical Anatomy, }	18 July 1898.
John Berry Haycraft, M.D.,	Physiology,	16 July 1894.
J. V. Jones, M.A., B.Sc.,	Physics,	16 July 1894.
W. N. Parker, Ph.D.,	Natural History,	28 July 1886.
Arthur L. Selby, M.A.,	Physics,	21 Oct. 1895.
Claude M. Thompson, M.A., D.Sc.,	{ Chemistry & Prac- tical Chemistry, }	28 July 1886.

(Lecture Course may be divided between two consecutive Sessions.)

A. H. Trow, B.Sc.,	Botany,	16 July 1894.
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## CORK.

J. J. Charles, M.D., D.Sc.,	Physiology,	<i>Date of Recognition.</i> 18 Feb. 1895.
<i>(Qualifying Course to embrace "Ordinary Course" and Course for Senior Students.)</i>		
Marcus Hartog, M.D., D.Sc.,	Zoology,	18 Mar. 1895.

## DUBLIN.

A. C. Haddon, M.A.,	Natural History,	23 Jan. 1888.
Chs. R. C. Tichborne, Ph.D.,	Practical Chemistry,	28 Feb. 1881.

## EDINBURGH.

A. P. Aitken, D.Sc.,	{ Chemistry & Prac- tical Chemistry,	{ 29 Oct. 1888.
J. O. Affleck, M.D.,	Practice of Physic,	8 Dec. 1879.
J. W. Ballantyne, M.D.,	Midwifery,	13 Dec. 1897.
R. J. A. Berry, M.D.,	Anatomy,	14 Dec. 1896.
Byrom Bramwell, M.D.,	Practice of Physic,	18 Oct. 1880.
Alexander Bruce, M.D.,	{ Practice of Medi- cine,	{ 18 Feb. 1901.
A. G. Bruce,	{ Practical Materia Medica,	{ 18 June 1894.
Francis M. Caird, M.B., C.M.,	Surgery,	13 August 1886.
Wm. Craig, M.D.,	{ Materia Medica & Prac. Materia Med.	{ 14 July 1879.
T. W. Drinkwater, Ph.D.	{ Chemistry and Practical Chemistry,	{ 8 March 1880. 14 July 1879.
William Duncan,	Prac. Materia Med.,	12 April 1886.
R. A. Fleming, M.A., M.D.	Medicine,	13 Dec. 1897.
E. S. Fry, M.B.,	{ Practical Materia Medica,	{ 21 Oct. 1895.
G. H. Gemmell,	Practical Chemistry,	13 May 1901.
George A. Gibson, M.D.,	Practice of Physic,	9 Dec. 1889.
A. Lockhart Gillespie, M.D.,	Materia Medica,	25 Oct. 1897.
David Berry Hart, M.D.,	Midwifery,	22 Oct. 1894.
F. W. N. Haultain, M.D.,	Midwifery,	15 June 1891.
J. W. B. Hodsdon, M.D.,	Surgery,	3 August 1888.
John Hunter, F.I.C., &c.,	{ Chemistry & Prac- tical Chemistry,	{ 2 Oct. 1894.
Alex. James, M.D.,	Practice of Physic,	3 August 1888.
Alexander Johnstone,	Botany,	26 Oct. 1892.
J. Falconer King, F.C.S.,	{ Chemistry & Prac- tical Chemistry,	{ 12 Nov. 1894.

EDINBURGH—*continued.*

*Date of Recognition.*

Harvey Littlejohn, M.D.,	{ Medical Juris- prudence, }	17 May 1897.
W. Ivison Macadam, F.R.S.E.	{ Chemistry & Prac- tical Chemistry, }	23 July 1888.
George Mackay, M.D.,	Ophthalmology,	13 July 1896.
J. S. M'Laren, M.B.,	Surgery,	26 Oct. 1892.
A. T. Masterman, D.Sc.,	Zoology,	13 Nov. 1899.
R. Milne Murray, M.B.,	Midwifery,	13 August 1886.
D. Noël Paton, M.D.,	{ Physiology and Prac. Physiology,	24 Oct. 1887.
R. W. Philip, M.D.,	Medicine,	19 March 1888.
George M. Robertson, M.B.,	Mental Diseases,	16 July 1894.
W. G. Aitchison Robertson, M.D.	{ Public Health, }	16 Oct. 1899.
William Russell, M.D.,	{ Pathology & Prac- tical Pathology, }	{ 10 April 1897.
Theodore Shennan, M.D.,	Pathology,	6 August 1887.
Alexis Thomson, M.D.,	Surgery,	16 Oct. 1899.
James Adam Terras, B.Sc.,	Botany,	30 Oct. 1893.
R. Turnbull, B.Sc.,	Botany,	12 Dec. 1898.
Dawson F. D. Turner, M.D.,	Physics,	18 Feb. 1895.
David Wallace, M.B.,	Surgery,	20 March 1893.
J. R. Whitaker, M.B.,	Anatomy,	14 Dec. 1896.
William Wood, M.B.,	Prac. Materia Med.,	16 July 1894.
		15 June 1893.

GLASGOW.

John Barlow, M.D.,	{ Physiology, Prac. Physiology,	26 Nov. 1883.
A. M. Buchanan, M.D.,	{ Anatomy and Prac- tical Anatomy, }	8 January 1890.
H. E. Clark, M.D.,	Surgery,	12 Oct. 1874.
John Edgar, M.D., B.Sc.,	Midwifery,	12 Feb. 1894.
Samson Gemmell, M.D.,	Practice of Physic,	14 Dec. 1896.
R. Barclay Ness, M.A., M.B.,	{ Materia Medica & Prac. Materia Med. }	18 July 1881.
Alex. Robertson, M.D.,	Practice of Physic,	16 Dec. 1895.
W. Ernest F. Thomson,	{ Physiology & Prac- tical Physiology, }	15 June 1891.
		13 Feb. 1899.

LIVERPOOL.

J. Wigglesworth and the Lancashire County Asylum,	{ Mental Diseases, }	{ 18 Dec. 1899.
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## LONDON.

EDINBURGH—*continued.*

LONDON INSTITUTE.		Date of Recognition.
H. E. Armstrong, Ph.D., F.R.S.,	} Chemistry, Physics,	{ 25 Oct. 1897. 25 Oct. 1897.
W. E. Ayrton, F.R.S., (Lecturers in the City and Guilds of London Institute.)		
(Courses to include First and Second Years of Study.)		
G. B. Howes,	Natural History,	18 July 1887.

## NOTTINGHAM.

J. W. Carr, M.A.,	Botany,	16 Jan. 1893.
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## SHEFFIELD.

Christopher Addison, M.D.,	Anatomy,	12 Dec. 1898
C. F. Myers Ward.	Physiology,	16 Jan. 1899.
W. Carlton Williams, B.Sc.,	{ Chemistry & Prac- tical Chemistry,	{ 26 Nov. 1883.

## SOUTH AFRICAN COLLEGE, CAPE TOWN.

P. D. Hahn, Ph.D., M.A.	{ Chem. (Theoretical and Practical),	{ 22 Oct. 1900.
J. C. Beattie, D.Sc.,	Physics,	22 Oct. 1900.

**B.—ABRIDGED REGULATIONS FOR GRADUATION  
IN MEDICINE AND SURGERY, APPLICABLE  
TO ALL WHO COMMENCED THEIR MEDICAL  
STUDIES BEFORE 1ST OCTOBER 1892.**

*For full Regulations see CALENDAR for 1898-99 or previous CALENDARS.*

Three Degrees are conferred—viz., Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.).

**DEGREES OF BACHELOR OF MEDICINE AND MASTER IN  
SURGERY (M.B., C.M.).**

*Preliminary Examination.*<sup>1</sup>—The preliminary subjects of examination are English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and any two of Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy, as prescribed on page 404

<sup>1</sup> The Dean of the Faculty will give information regarding examinations which exempt from the Preliminary Examination; and see also CALENDAR for 1892-93, and previous CALENDARS, for examinations which exempt.



hereof. The examinations in English, Latin, Arithmetic, and Mathematics, are the same as in English, Latin, and Mathematics (which includes Arithmetic) for M.B., Ch.B.; and the examination in Mechanics is the same as that in Dynamics in the Arts and Science Preliminary Examinations.

*See Time-Table of Examinations, Dates of Entering and Payment of Fees, &c., pp. 386 and 387.*

*Professional Education.*—The chief differences between the Old and New Regulations are :—Candidates for Graduation under the Old Regulations are not required to attend courses on Physics, Mental Diseases, Diseases of the Eye, Diseases of Children, Diseases of the Larynx, Ear and Nose, Clinical Instruction in Fevers, Post-Mortem Examinations. Clerking and Dressing in a Public Hospital, Diseases of the Skin. In Practical Anatomy they are only required to attend a five months' course; in Clinical Medicine and Clinical Surgery one course of five months, or two courses of three months each, and Hospital attendance for twenty-four months.

*Professional Examinations.*—The only differences are:—Candidates under the Old Regulations are not examined in Physics in the First Professional Examination. The Regulations for entering for the First and Second Professional Examinations, and for payment of Fees are the same as for M.B., Ch.B. The Examinations in Pathology are held at the same time as the Examinations in that subject for M.B., Ch.B.; *but the regulations for entering and payment of Fees are as for the Second Professional Examination.* During 1902 the examinations in Forensic Medicine and Public Health may be taken in *Spring* in the Third Professional Examination for M.B., Ch.B., or in the Final Examination. The examinations in the other subjects of the Final Examination take place at the same time as in the corresponding subjects for M.B., Ch.B.; *but Candidates under the Old Regulations are required to enter their names, and pay the Fees for the Final Examination on or before 20th March; and Certificates will be examined on 26th March, from 10 to 3.* See Time Tables of Examinations, pp. 396-398.

Otherwise the Regulations are the same as for M.B., Ch.B.  
For further information apply to the Dean of the Faculty.

*Optional Preliminary Subjects of Examination under the Old Regulations for Bachelors of Medicine and Masters in Surgery (M.B., C.M.) who intend to proceed to the Degree of Doctor of Medicine, and*

*for those who commenced the Study of Medicine by attendance on Medical Classes before 1st October 1892, for Autumn 1901 and Spring 1902 inclusively.*

Each Candidate is required to pay a fee of 10s. 6d. for each appearance at the Preliminary Examination.

1. GREEK.—Xenophon, *Cyropaedia*, Book V. Some easy sentences of English will be set to be translated into Greek.

2. FRENCH.—Alphonse Daudet's *Le petit Chose, première partie* (Hachette & Co.). An easy passage in English will be given for translation into French.

3. GERMAN.—Homann, *Deutsche Märchen*, Nos. 8-14. An easy passage in English will be given for translation into German.

4. HIGHER MATHEMATICS.—Same as Higher Mathematics for the Preliminary Examination for the Degree of M.A.

5. NATURAL PHILOSOPHY.—(1) Properties of matter—Elasticity, Density, Porosity, Capillarity, &c. (2) Elementary phenomena of Sound, Light, Heat, Electricity, and Magnetism. Text-Books recommended—Balfour Stewart's *Elementary Physics*, and Tait's *Properties of Matter*.

6. LOGIC.—The Elements of Deductive and Inductive Logic, as in Jevons's Elementary Lessons.

7. MORAL PHILOSOPHY.—Professor Seth's\* *Ethical Principles*, Introduction and Part I.

## DEGREE OF DOCTOR OF MEDICINE.<sup>1</sup>

*For full Regulation see CALENDAR for 1898-99 or previous CALENDARS.*

XVII. The Degree of DOCTOR OF MEDICINE may be conferred on any candidate who has obtained the Degrees of Bachelor of Medicine and Master in Surgery, and is of the age of twenty-four years, and produces a certificate of having been engaged subsequently to his having received the Degrees of Bachelor of Medicine and Master in Surgery, for at least two years in attendance on an Hospital, or in the Military or Naval Medical Services, or in Medical and Surgical Practice:

Provided always that the Degree of Doctor of Medicine shall not be conferred on any person, unless he be a Graduate in Arts of one of the Universities of England, Scotland, or Ireland, or of such other Universities as have been specially recognised for

<sup>1</sup> Candidates for M.D. under Old Regulations, who have not passed all the required Preliminary subjects may, if they prefer to do so, go under the new Regulations, and take the examination in Clinical Medicine instead. (See pp. 381-383.)

that purpose, or unless he shall, before or at the time of his obtaining the Degrees of Bachelor of Medicine and Master in Surgery, or thereafter, have passed a satisfactory examination in Greek, and in either Logic or Moral Philosophy, and in one of the following subjects at the option of the Candidate—namely, French, German, Higher Mathematics, and Natural Philosophy.

And provided also that the candidate for the Degree of Doctor of Medicine shall submit to the Faculty of Medicine a Thesis, certified by him to have been composed by himself, and which shall be approved by the Faculty, on any branch of knowledge comprised in the professional examinations for the Degrees of Bachelor of Medicine and Master in Surgery, which he may have made a subject of study after having received those Degrees. The Candidate must lodge his Thesis with the Dean on or before 30th April of the year in which he proposes to graduate. No Thesis will be approved by the Medical Faculty which does not contain either the results of original observations in practical Medicine, Surgery, Midwifery, or in some of the sciences embraced in the curriculum for the Bachelor's and Master's Degrees; or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the Candidate, accompanied by precise references to the publications quoted, so that due verification may be facilitated.<sup>1</sup>

Candidates, settled for a period of years in foreign parts, who have complied with all the regulations for the Degree of M.D., but who cannot appear personally to receive the Degree, may, on satisfying the Senatus to that effect, by production of sufficient official testimonials, have the Degree conferred on them in absence.

#### FEES FOR DEGREES, &c.

Examination in Botany, Chemistry, Chemical Testing, Natural History, . . . . .	£5 5 0
Examination in Anatomy, Institutes of Medicine, Materia Medica, Prescriptions, Pathology, . . . . .	5 5 0
Final Examination in Surgery, Midwifery, Practice of Physic, Forensic Medicine and Public Health, Clinical Medicine (with Prescriptions), Clinical Surgery, during last Summer Session, . . . . .	10 10 0
Total Fees for M.B. and C.M. Diplomas, . . . . .	£21 0 0

<sup>1</sup> Candidates are required to write their Theses on faint lined paper, 11 in. by 8½ in. with margins 1½ in. at each side. The Thesis is to be written on one side of each leaf only.

## 406 *Graduation in Medicine—Old Regulations—Fees.*

Fee for M.D.,	.	.	.	.	.	.	.	£5	5	0
Matriculation Fee,	.	.	.	.	.	.	.	1	1	0

In the event of the Candidate failing to pass any one of the Professional Examinations, the Fee is not returned ; but he may appear at one subsequent examination without paying an extra Fee, and at any future examination on paying a Fee of £2, 12s. 6<sup>d</sup>.

1902

April	30.		Theses to be given in, Certificates shown, and Fees paid <i>on or before</i> this date.
July	17.	Th.	Names to be given in for Graduation <i>on or before</i> this date. <sup>1</sup>
„	26.	Sat.	GRADUATION CEREMONIAL at 10 A.M. Graduands are required to assemble at 8.45 A.M.

### REGULATIONS FOR INSTRUCTION AND FOR SPECIAL CERTIFICATE IN DISEASES OF TROPICAL CLIMATES.

1. Each Course of Instruction shall be open to (1) Qualified Medical Practitioners ; (2) Students who have completed the Curriculum for the Final Examination in Medicine of any of the Qualifying Medical Authorities ; and (3) others specially interested in the subject.

2. Certificates of attendance will be granted as follows :—(a) A Class Certificate to each member of the Class who has performed the work of the Class in a satisfactory manner ; (b) A University Certificate by the Dean of the Faculty of Medicine to each member of the Class who has attended a course of instruction on Practical Bacteriology, including the Micro-organisms of Tropical Diseases, who has also attended the course of instruction in Tropical Diseases, and who has performed the work of both of these Classes in a satisfactory manner. This Certificate shall be based on evidence received from the Teachers on Practical Bacteriology and Tropical Diseases.

<sup>1</sup> If Theses and Certificates are not lodged, or fees not paid, on or before the dates specified, a late-entry fee of 10s. will be charged. See also Regulations as to entering for Examinations, page 395.

REGULATIONS FOR SPECIAL STUDY AND RESEARCH, AND FOR THE APPOINTMENT OF RESEARCH FELLOWS, &C. See page 117.

REGULATIONS FOR THE DEGREE OF D.SC., &C. See page 119.

## DOCTORS OF MEDICINE

WHO HAVE BEEN AWARDED GOLD MEDALS FOR THEIR THESES FROM 1889 TO 1900 INCLUSIVELY.<sup>1</sup>

1889.

Herbert H. Ashdown, England  
John W. Ballantyne, Scotland  
Arthur J. M'D. Bentley, England  
Kenneth M. Douglas, Scotland  
Thomas A. Helme, England  
Henry Alexis Thomson, Scotland  
Joseph Tillie, Scotland  
Herbert F. Waterhouse, England

1890.

Joseph Griffiths, Wales  
Robert Muir, Scotland  
George Edmund Piercz, Ceylon  
W. G. A. Robertson, Scotland  
Arthur Robinson, England  
John David Williams, Wales

1891.

Edmund W. W. Carlier, England  
Vaughan Berkeley Harley, England  
David Hepburn, Scotland  
Alexander Miles, Scotland  
James Ritchie, Scotland  
George Neil Stewart, Scotland  
John Clarence Webster, Canada

1892.

George Sandison Brock, Scotland  
Alex. Lockhart Gillespie, Scotland  
William Aldren Turner, Scotland  
Arthur John Whiting, England  
Theodore Stacey Wilson, England

1893.

Francis Darby Boyd, Scotland  
James Samuel Risien Russell  
Demerara  
James Lorrain Smith, Scotland  
John Cleasby Taylor, England  
William Ernest Francis Thomson,  
Scotland

1894.

Lewis Campbell Bruce, Scotland  
William Menzies Hutton, Scotland  
Gustav Mann, India  
James Acworth Menzies, Scotland  
John Douglas Stanley, Ireland

1895.

Frank Leigh Ehrke, England  
Wilfred Vincent Miller Koch,  
Ceylon  
James Ritchie, Scotland  
Andrew Walker, Scotland

1896.

Robert Swan Aitchison, Scotland  
William Elder, Scotland  
Robert Alexander Fleming, Scot-  
land  
Claude Buchanan Ker, England  
John Macpherson, Scotland  
Thomas Hugh Milroy, Scotland  
George Robert Wilson, Scotland

<sup>1</sup> The names of those who received Gold Medals prior to 1859 will be found in the List of Graduates in Medicine of the University of Edinburgh since its foundation, published in 1867, and the names of those who received Gold Medals from 1859 to 1888, both years included, will be found in the Historical Appendix to List of Graduates, published in 1889, pp. 128, 129.

1897.

Friedrich Wilhelm Eurich, M.D.,  
Saxony  
William Edward Fothergill, M.D.,  
England  
Thomas Alexander Wemyss Ful-  
ton, M.D., Scotland  
David Arthur Welsh, M.D., Scot-  
land

1898.

Andrew Balfour, M.D.  
Alexander Corsar Sturrock, M.D.

1899.

Robert William Beesley, M.D.,  
England

Dina Nath Prithu Datta, M.D.,  
India  
Percy Theodore Herring, M.D.,  
England  
Jessie MacLaren MacGregor,  
M.D., Scotland  
John Malcolm, M.D., Scotland  
William John Munro, M.D.,  
Australia

1900.

Walter William Chipman (B.A.),  
M.D., Canada  
David James Galloway, M.D.,  
Scotland  
David Waterston, M.A., M.D.,  
Scotland

DOCTORS OF MEDICINE WHO GRADUATED ON 28TH JULY 1900,  
WITH THE TITLES OF THEIR THESES.

\*\*\* *Obtained Gold Medals for their Dissertations.*

\*\* *Deemed worthy of competing for Gold Medals.*

\* *Commended for their Dissertations.*

Charles Crawford Aitken,  
Scotland, M.B., C.M.,  
1894. The Nervous Sys-  
tem in Pregnancy: Its  
Functional Disorders;  
Their nature and treat-  
ment.

Charles James Hill Aitken,  
Scotland, M.B., C.M.,  
1894. Minor Complaints  
associated with Dilatation  
of the Stomach.

\* Hugh Llewellyn Apthorp,  
England, M.B., C.M.,  
1897. A study of Rheu-  
matoid Arthritis.

\* James Andrew Blair (D.Sc.),  
Scotland, M.B., C.M.,  
1884. An original Re-  
search, containing an  
account of a New Method  
for the estimation of Or-

ganic Carbon and Nitro-  
gen; also a Research on  
the Organic Analysis of  
Potable Waters by this  
new Process.

5\*\* John Macdonald Brown,  
Scotland, M.B., C.M.,  
1880. A Contribution to  
our knowledge of the Hy-  
pophysis and Epiphysis  
Cerebri.

Alexander Brownlie, Scot-  
land, M.B., C.M. (with  
First - Class Honours),  
1892. Ichthyol, its uses  
in some Skin Diseases.

\*\*\* Walter William Chipman  
(B.A.), Canada, M.B.,  
C.M., 1895. Observations  
on the Placenta of the  
Rabbit, with special refer-  
ence to the presence of  
Glycogen, Fat and Iron.



- \* Frank Herbert Aylen Clayton, England, M.B., C.M., 1892. Observations on the Aetiology, the "Congestive seizures" and the management of General Paralysis of the Insane, with special reference to its occurrence in the Royal Navy.
- Frederick William Collinson, England, M.B., C.M. (with Second-Class Honours), 1885. Albuminuria in the apparently healthy.
- 10\* Horace Crakanthorp Colman, England, M.B., C.M., 1896. Pernicious Anæmia: A Review: with an Analysis of 87 collected cases, and the final result of many apparent cures.
- William Craig, Scotland, M.B., C.M., 1886. The Administration of Antipyretics in Typhoid Fever.
- \* Herbert William Crosse, England, M.B., C.M., 1891. The Treatment of Pulmonary Tuberculosis.
- Arthur Dickson, Scotland, M.B., C.M., 1896. Appendicitis.
- \*\* Charles Cromhall Easterbrook (M.A.), England, M.B., C.M. (with First-Class Honours), 1892. Organo-Therapeutics in the Insane.
- 15\* Alexander Edington, Scotland, M.B., C.M., 1886. South African Horse-Sickness: Its Pathology and methods of protective inoculation.
- William Ernest Lloyd Elliott, Wales, M.B., C.M., 1888.
- Pani Ghao (Water Sore), commonly called Sorefeet of Assam Coolies.
- \*\*\* David James Galloway, Scotland, M.B., C.M., 1884. Sprue. (*In absentia*.)
- William Alexander Gibb, Scotland, M.B., C.M., 1895. Friedreich's Ataxia.
- Wilfred Ernest Gibbons, England, M.B., C.M., 1896. Intracranial Trifacial Neurectomy, and removal of the Casserian Ganglion.
- 20\* James Andrew Gibson, Scotland, M.B., C.M., 1895. Influenza: with special reference to the use of Arsenic as a Tonic in Convalescence.
- \*\* Robert M'Lean Gibson, Scotland, M.B., C.M., 1896. Beriberi in Hong-kong.
- Robert Wilson Gibson, England, M.B., C.M., 1887. Observations on certain Thyroid Diseases.
- Thomas Gibson, Scotland, M.B., C.M., 1895. The relation of Sore Throat to Rheumatic Fever, and allied conditions.
- \* Harry Grey, Scotland, M.B., C.M., 1893. The Treatment of Puerperal Eclampsia.
- 25 George Pouncey Henderson, England, M.B., C.M., 1895. The treatment of Ulcers, with special reference to ulcers of the leg.
- \*\* Thomas Alfred Hird, England, M.B., C.M., 1882. The Morphia Habit.
- Guy Bertram Hollings, Eng-

- land, M.B.; Ch.B., 1897. The Etiology, Symptoms, Diagnosis and Treatment of Empyema of the Nasal Accessory Cavities.
- Edward Siddall Jackson, England, M.B., C.M., 1879. Serum Therapy, with notes of cases treated by Antitoxin Serum, and Remarks.
- Arthur Septimus Lawrence, South Africa, M.B., C.M., 1888. Acromegaly, with notes of a case, and with special reference to the theory of reversion to the Simian type.
- 30 \*William Duncan Lawrie, England, M.B., C.M., 1892. Hysterical Mutism.
- Henry James Ley, England, M.B., C.M., 1883. Physiognomy and Disease.
- \* Peter Burden M'Nicol, Scotland, M.B., C.M., 1886. Notes on the Administration and Action of Chloroform, with a criticism of the discussion on the subject as it appears in the pages of *The British Medical Journal*, 1874 to 1899 (inclusive).
- \* James Sackville Martin, Ireland, M.B., C.M., 1895. Injuries to the Cranium and its Contents.
- George Victor Miller, England, M.B., C.M., 1888. Notes on Retrobulbar Neuritis, &c.
- 35 Ahmed Mirza (B.Sc.), India, M.B., C.M., 1892. Short Historical Sketches of Ayur Vedic, or Hindu System of Medicine, and of Unani or Mahomedan System of Medicine.
- \* Owen St John Moses, Armenia, M.B., C.M., 1896. Dysentery.
- \* Bernard Ehrenfried Myers, New Zealand, M.B., C.M., 1898. Statistics of Post Diphtheritic Paralysis, and the Pathology of the Heart in Cardiac Paralysis of Diphtheria.
- \* James Nicoll, Scotland, M.B., C.M., 1897. Some observations on the Co-existence of Pulmonary Tuberculosis and Diseases of the Vascular System.
- Harold Nuttall, (M.A.), England, M.B., C.M., 1897. The Parasitology of Malaria.
- 40 Ernest Stanley Nutting, England, M.B., C.M., 1885. Congenital Hypertrophy of the Pylorus.
- \* Edward Lloyd Owen, Wales, M.B., C.M., 1895. Treatment by Retaining or Retained Gynæcological Appliances.
- George Peterkin, England, M.B., C.M., 1892. Rheumatic Fever.
- \* James Coubro Potter, England, M.B., C.M., 1893. Plastic Bronchitis.
- Frank Grégoire Proudfoot (M.A.), Scotland, M.B., C.M., 1894. Notes on Typhoid Fever.
- 45\*\* Francis White Hope Robson, England, M.B., C.M., 1893. Malignant Mediastinal Tumours.
- David Richard Rowlands, Wales, M.B., C.M., 1896.

Ectopic Gestation: Notes on two cases, with special reference to the Diagnosis and treatment.

Gerald Alick Southwell Sander, France, M.B., C.M., 1896. The Surgical treatment of Gastric Ulcer, and its Complications—more especially perforation.

\* James Duncan Slight (M.A.), Scotland, M.B., Ch.B. (with First-Class Honours), 1897. The Theory of Internal Secretion, as it applies specially to (a) the Pancreas, and (b) the Ovary, with a preliminary notice of an Experimental Inquiry into the significance of the Corpus Luteum.

Alexander Campbell Smith, Scotland, M.B., C.M., 1893. The Bacterial treat-

ment of Sewage, with references to Intermittent Downward Filtration, and Broad Irrigation.

50\* John Nigel Stark, Scotland, M.B., C.M., 1884. Puerperal Infection.

John Edward Thomas, Wales, M.B., C.M., 1890. Some Morbid Conditions of Pregnancy considered Clinically and Pathologically

\*\* Peter George Leeb-du Toit, South Africa, M.B., Ch.B., 1898. Some Therapeutic Applications of Oxygen Gas, and an Experimental Research on Animals with Oxygen Gas.

\*\*\* David Waterston (M.A.), Scotland, M.B., C.M. (with Second-Class Honours), 1895. Studies in the Osteology of the human Fœtus and Infant.

BACHELORS OF MEDICINE AND MASTERS IN SURGERY (M.B., C.M.)  
WHO HAVE PASSED THE EXAMINATIONS WITH HONOURS  
FROM 1889 TO 1900, BOTH YEARS INCLUDED.<sup>1</sup>

1889.

*Class I.*

Robert Oswald Adamson (M.A.), Scotland

John William Crerar, Scotland

William Fred. Farquharson, Scot.

James Lackie, Scotland

Jas. Hill Williamson Laing (M.A., B.Sc.), Scotland

Hamilton Graham Langwill, Scot.

Alexander Maclean, Scotland

Eustace G. Pilgrim, Barbados

Wm. Gordon Woodrow Sanders, Scotland

James Andrew Thyne, Scotland

George Wilkinson, England

*Class II.*

Robert Dunlop Reid Allison, Scotland

William Everett, England

George Alfred Walter, England

Colin Gordon, England

Ewan John Maclean, Wales

James Monteith, Scotland

<sup>1</sup> For names of those who received the Degrees with Honours prior to 1889, see Historical Appendix to List of Graduates of the University published in, 1889, pp. 129-132.

Benjamin Sweeten, Scotland  
C. N. C. Wimberley, Scotland

1890.

*Class I.*

Charles James Whitehead Dixon, England

Carstairs Cumming Douglas, Scot.

Gerald Fitzgerald, Scotland

Robert Main Horne, Scotland

Colin Forbes Lees, Scotland

William Paterson, Scotland

George William Thompson, La Plata

William Kerr Walker, Scotland

*Class II.*

Ed. H. Alexander, New Zealand

Robert Brown, Scotland

John Wheeler Dowden, Ireland

George Balfour Marshall, Scotland

Arnold W. Williams, England

1891.

*Class I.*

John Wardle Bone, England

Wm. Blackley Drummond, Scot.

George Elder, Scotland

Edward Barnard Fuller, Africa

Henry Baker Hall, England

George Hennan, Scotland

Herbert Saunders Wansbrough Jones (B.Sc.), Wales

Harry Rainy (M.A.), Scotland

*Class II.*

Robt. J. Ashton (B.A.), England

Robert Cran, Scotland

Frederich Wilhelm Eurich, Saxony

David J. Mackenzie (M.A.), Scotland

John Orr, Scotland

David Stuart, Scotland

Wm. J. Walker (B.A.), Australia

Neish Park Watt (M.A.), Scotland

John Thos. Wilson, Tasmania

1892.

*Class I.*

Alexander Brownlie, Scotland

Charles Cromhall Easterbrook, (M.A.), England

George Home, New Zealand

Lim Boon Keng, Singapore

Robert Murray Leslie (M.A., B.Sc.), Scotland

Donald Macaulay (M.A.), Scot.

*Class II.*

Alexander Douglas (M.A.), Eng.

Daniel Charles Edington, Scot.

John James Evans, Wales

Arthur Fells, England

James Stewart Fowler, Scotland

Robert Walker Gray, Scotland

Robert John Johnston, Scotland

Geo. Wm. F. Macnaughton, Scotland

Philip Oscar Malabre, Jamaica

Peter William Shaw, Scotland

Alfred George Talbot (B.A.), New Zealand

George Templeton, Scotland

1893.

*Class I.*

Charles Crerar, Scotland

John Buchanan Duff, Scotland

Alex. M. Easterbrook, Scotland

Wm. E. Fothergill (M.A., B.Sc.), England

Robert Hutchison, Scotland

Robert H. Makgill, Scotland

Jas. V. Paterson, M.A., Scotland

David W. Sutherland, Australia

Hugh Walker (M.A.), Scotland

D. A. Welsh (M.A.), Scotland

*Class II.*

William Randolph Center, Scot.

Robert Craig Dun, Scotland

George Harry Dupont, England

Charles Alfred Hogg, Tasmania

Charles Kerr, Scotland

James G. Macnaughton, Scotland

W. M'D. Selby, Scotland

St John Stanwell, England

John Steed, England

John Tennant (M.A.), Scotland

John Brown Yeoman, Scotland

1894.

*Class I.*

James Martin Beattie (M.A.),  
New Zealand  
Evan John Hewat Fraser, Eng-  
land  
George Brooke French, England  
Thomas Gibson (M.A.), Ireland  
John Rutherford Gilmour, Scot-  
land  
Neil MacVicar, Scotland  
William Anderson Stephen (M.A.),  
Scotland  
James Purves Stewart (M.A.),  
Scotland

*Class II.*

Robert William Beesley, England  
Robert Ward Briggs, England  
Alexander Keith Campbell, Scot-  
land  
Thomas H. C. Derham, England  
Charles Francis Lassalle, W. Indies  
James Donald Macrae, Scotland  
Hezlett Hamilton Marshall, Aus-  
tralia  
Arthur Maxwell Nicholson Pringle,  
Scotland  
Walter Russell Strapp, Natal

1895.

*Class I.*

Joseph Edward Bowes, England  
John Forbes (M.A.), Scotland  
William John Garbutt, England  
Rhodes Haygarth, England  
Andrew Robertson Wilson (M.A.),  
Scotland  
William De Wever Wishart, British  
Guiana

*Class II.*

James Gray, Scotland  
Albert Lewis Husband, England  
Robert MacWilliam Leith, Cape  
Colony  
William Lillie, India  
David Rankine (M.A.), Scotland

David Waterston (M.A.), Scot-  
land

James Rodger Watson (M.A.,  
B.Sc.), Scotland

1896.

*Class I.*

William Haining Carse, Scotland  
John Eason, Scotland  
Percy James Henderson, Scotland  
Percy Theodore Herring, England  
John George Patrick Murray,  
England  
Alexander Corsar Sturrock (M.A.),  
Scotland

*Class II.*

John Thomas Hewetson, Eng-  
land  
Alexander Petrie Lowe, Scotland  
Arthur David Yule, Scotland

1897.

*Class I.*

Harold Sherman Ballantyne  
(B.Sc.), Scotland  
William Frederic Harvey (M.A.),  
India  
George Carmichael Low (M.A.),  
Scotland  
Edwin Matthew (M.A.), Scot-  
land

*Class II.*

William Finlay (Bach.-ès-Lett.),  
Scotland  
James Graham, Scotland  
Evan Harries Jones, Wales  
Leslie Kingsford, New Zealand  
Andrew Hutton Watt, Scotland

1898.

*Class II.*

Charles Chilton (M.A., D.Sc.),  
New Zealand  
William Henry Dawson (M.A.,  
B.Sc.), New Zealand

1900.

*Class II.*

John Charles Mitchell (D.Sc.),  
Scotland

BACHELORS OF MEDICINE AND BACHELORS OF SURGERY (M.B., Ch.B.), WHO HAVE PASSED THE EXAMINATIONS WITH HONOURS FROM 1897 TO 1900 BOTH YEARS INCLUDED.

1897.

*Class I.*

Charles Miner Cooper, England  
John Smith Fraser, Scotland  
William Hamilton, England  
James Duncan Slight (M.A.),  
Scotland

*Class II.*

Bertram Cecil Robert Aldren,  
England  
Theodore Robert William Armour,  
Scotland  
John Malcolm, Scotland  
John William Struthers, Scotland

1898.

*Class I.*

William Neish Barker, Scotland  
Archibald Currie M'Gilchrist  
(M.A.), Scotland  
John Henry Rhodes, England  
Alfred Charles Sandstein, New  
Zealand  
Robert Frederick M'Nair Scott  
(B.A.), Scotland  
Donald Bremner Waters (M.A.),  
Scotland

*Class II.*

William Bell, England  
Stanley Branch, West Indies  
John Cameron (B.Sc.), Scotland  
George Dick, Scotland  
Robert James Dick, Scotland  
Duncan Forbes, Scotland  
George Edwin James King, England  
Henry Wade, Scotland

1899.

*Class I.*

William John Barclay (B.A.), New  
Zealand  
John Dixon Comrie (M.A., B.Sc.),  
Scotland  
George Lyon, Scotland  
Arthur Preston, England

Charles Henry James Watson,  
England

*Class II.*

David Ewart, New Zealand  
James John Galbraith, Scotland  
John Gray Jack, Scotland  
Robina M'Gregor, Scotland  
Harry Malcolm MacKenzie, Scot-  
land  
James Masson (M.A., B.Sc.), Scot-  
land  
James Miller, (B.Sc.), Scotland  
William Moncrieff Paul (M.A.),  
Scotland  
Robert Morison Rowe (M.A.),  
Scotland  
William James Stuart (M.A.),  
Scotland

1900.

*Class I.*

George Scott Carmichael, Scot-  
land  
William Ernest Frost, Ireland  
George Henry Hanna, Jamaica  
John Pender, Scotland  
Robert Ainslie Ross, South Africa  
Arthur Murray Wood, Scotland

*Class II.*

Arthur Branfoot Black, Scotland  
Orlando Charnock Bradley, Eng-  
land  
Edward Ewart, Scotland  
James George Silver Jamieson  
(M.A.), Scotland  
Langworthy Laurie, England  
John Gordon M'Dougall, Scotland  
Arthur Anderson Martin, New  
Zealand  
Thomas Scott Shepherd, England  
Alexander Trotter, Scotland  
William Wallace, England  
Garnett Wright, England



BACHELORS OF MEDICINE AND MASTERS IN SURGERY (M.B., C.M.).

28TH JULY 1900.

*Small CAPITALS indicate First-Class Honours.*

*Italics, Second-Class Honours.*

Maung Ba-Ket, Burma	Robert Alexander MacKenzie
John Brodie Boyd, Scotland	Macleod, Scotland
Thomas George Elsworth, England	<i>John Charles Mitchell</i> (D.Sc.), Scotland
Oswald Arnold Gee, England	Archibald Duncan Nimmo, Scotland
5 John Thomas Hurst, England	10 Robert Owen, Wales
John Malcolm Jeffrey, Scotland	Miles Charles Carreston Seton, Scotland

20TH OCTOBER.

Thomas George Elsworth, England	Samuel Everett Johnston, Scotland.
Arthur Hall Reid, Trinidad	

BACHELORS OF MEDICINE AND BACHELORS OF SURGERY (M.B. AND Ch.B.).

28TH JULY 1900.

*Small CAPITALS indicate First-Class Honours.*

*Italics, Second-Class Honours.*

Robert Cunningham Affleck, Scotland	10 Alexander James Baird (M.A.), Scotland
Henry Alexander, Ireland	Harvey Baird, Scotland
Thomas Wood Wilson Alexander, Scotland	Simon Alexander Ballantyne, Scotland
Eliza Matthew Anderson, Scotland	Leonard Dieckmann Hamilton Baugh, Jamaica
5 Mary Scott Anderson, Scotland	John Henderson Bell, Scotland
Henry Ernest Arbuckle, Natal	15 Joseph Mitchell Benson, England
Robert Andrew Jacomb Asbury, England	Hubert Bishop, Trinidad
Bernard Hugh Stanley Aylward, England	<i>Arthur Branfoot Black</i> , Scotland
Albert Augustus Ayton, Jamaica	John Southey Bostock, England

- Orlando Charnock Bradley*, England
- 20 *Laurence Percival Brassey*, England  
*James M'Culloch Leigh Brown* (M.A.), Scotland  
*Launcelot Bruce*, Scotland  
*Adam Brydon*, Scotland  
*George Farnie Buist*, Scotland
- 25 *George Berkeley Butt*, Ireland  
*John Profeit Campbell*, Scotland  
*Malcolm Campbell* (M.A.), Scotland  
*Samuel Marcus Dill Campbell*, Ireland  
*GEORGE SCOTT CARMICHAEL*, Scotland
- 30 *Violet Alice Penrose Coghill*, Ireland  
*John Craig*, Scotland  
*Leonard Crossley*, England  
*Horatius Bonar Dodds*, Scotland  
*John Primrose Douglas*, Scotland
- 35 *Cyril Hartley Durrant*, West Indies  
*William Eadie*, England  
*Robert Sidney Ellis*, Scotland  
*Cecil Henry Elmes*, Ireland  
*Johannes Stefanus Enslin*, South Africa
- 40 *David Robert Evans*, Wales  
*Edward Ewart*, Scotland  
*Drummond James Fergusson*, England  
*Andrew Fleming*, Scotland  
*Bernard Gilpin Forman*, Scotland
- 45 *Catherine Fraser*, Scotland  
*Charles Fraser* (M.A.), Scotland  
*Alexander Frew*, Scotland  
*WILLIAM ERNEST FROST*, Ireland  
*Yoshinobu Fukuda*, Japan
- 50 *James Stewart Geikie*, Scotland  
*William Girdwood*, South Africa  
*Arthur Evelyn Goldie*, Jamaica  
*George Watson Guthrie*, Scotland  
*GEORGE HENRY HANNA*, Jamaica
- 55 *Frederick Hardie*, Scotland  
*Norman Ernest Jasper Harding*, England  
*Herbert Harris*, England  
*Thomson Henderson*, Scot.  
*Davis Heron*, Ireland
- 60 *Eleanor Hodson*, England  
*Katie Welton Hogg* (B.A.), Australia  
*Henry John Hoile* (M.A.), Scotland  
*Lionel John Hood*, Australia  
*William Hutchison*, England
- 65 *Francis Field Cunningham Jagger*, England  
*Edward Bald Jamieson*, Scotland  
*James George Silver Jamieson* (M.A.), Scotland  
*James Crawford Kennedy*, Scotland  
*Francis Kenneth Kerr*, Scotland
- 70 *Herbert Christian Keun*, Straits Settlements  
*Servase Meyer de Kock*, South Africa  
*George Ross Laing*, Scotland  
*Langworthy Laurie*, England  
*Robert Gerald Leach*, England
- 75 *Charles George Stretton*, Leeds, England  
*George Herbert Lewis*, Wales  
*Robert John M'Clelland*, Ireland  
*Christopher Birdwood M'Conaghy*, Ireland

- John Gordon M'Dougall*, Scotland
- 80 *Sara Lyle M'Elderry*, Ireland  
*Elizabeth M'Elney*, Ireland  
*Alexander Campbell Nicholson M'Hattie*, Scotland  
*James Herbert M'Kee*, Ireland  
*Alexander John MacKenzie*, Scotland
- 85 *Dundas Simpson MacKnight*, Scotland  
*Robert Clephane Maclachlan*, New Zealand  
*Harriet Joanna Campbell Maclaren (M.A.)*, Scotland  
*Henry John M'Lean*, New Zealand  
*Duncan Mackay MacLeod*, Scotland
- 90 *John M'Callum Anderson Macmillan (M.A.)*, Scotland  
*Elizabeth Macrory*, Ireland  
*Arthur Anderson Martin*, New Zealand  
*Harry Mason*, England  
*Frederick Crichton Matthew (M.A.)*, Scotland
- 95 *Mary Jenny Menzies*, England  
*Hugh Crichton Miller (M.A.)*, Scotland  
*John Brownlee Milne*, Scot.  
*Robert Macfarlane Mitchell*, Scotland  
*Janet Ainslie Shiells Mouat*, Scotland
- 100 *James Munro*, Scotland  
*Florizel de Lorme Myers*, Jamaica  
*Horace Clulow Nixon*, England  
*Caroline Elizabeth O'Connor*, Ireland  
*James Cuthbertson Parker*, Scotland
- 105 *Norman Patterson*, Scotland  
*Cuthbert Balfour Paul*, Scotland  
*JOHN PENDER*, Scotland  
*Mary Churchill Pepper*, England  
*John Boyd Primmer*, Scotland
- 110 *John Rowlands Prytherch*, Wales  
*Samuel Rattray*, Scotland  
*Percy Chambers Rayner*, England  
*John Lawrence Rentoul*, Ireland  
*Owen Lewellin Rhys*, Wales
- 115 *Catherine Mary Richardson*, England  
*Lionel Charles Peel Ritchie*, Scotland  
*Thomas Robert Robertson*, Scotland  
*William Rogers*, Wales. (*In absentia*.)  
*ROBERT AINSLIE ROSS*, South Africa
- 120 *William Charles Ross*, Scotland  
*Arthur John Ryle*, Wales  
*Laura Stewart Sandeman*, Scotland  
*Richard Akiwande Savage*, West Africa  
*Thomas Boyle Hill Scott*, Ireland
- 125 *William Sibbald Scott*, Scotland  
*Alexander Kenneth Smith Shand*, Scotland  
*Hubert Dunbar Shepherd*, England  
*Thomas Scott Shepherd*, England  
*Samuel Ramsay Sibbald*, Scotland
- 130 *Frederic David Simpson*, Scotland  
*William Sloss*, Australia

- |     |   |   |
|-----|---|---|
|     | Harry Oswald Smith, Scot.                           | <i>William Wallace</i> , England            |
|     | Charles Buchanan Snow (B.A.,<br>B.Sc.), New Zealand | Andrew Gordon Watson,<br>Scotland           |
|     | Charles Edward Southon,<br>India                    | Allan Stewart Watson, Eng-<br>land          |
| 135 | Hugh Meredith Spiers, Eng-<br>land                  | Norman Septimus Wells,<br>Burma             |
|     | Arthur Dunbar Spence, Scot.                         | 150 George Duncan Whyte, Eng-<br>land       |
|     | Eleanor Rosina Sproull, Ire-<br>land                | Frank Morewood Wigg, Aus-<br>tralia         |
|     | Thomas Grainger Stewart,<br>Scotland                | Alexander Jeans Williamson,<br>Scotland     |
|     | Clement Percival Strong,<br>India                   | Tasman John George Wilson,<br>Tasmania      |
| 140 | Frederic Troughton Thomp-<br>son, Scotland          | Albert Edward Bathurst<br>Wood, England     |
|     | John Thornhill, Ireland                             | 155 ARTHUR MURRAY WOOD,<br>Scotland         |
|     | John Hardwick Thornley,<br>England                  | <i>Garnett Wright</i> , England             |
|     | <i>Alexander Trotter</i> , Scotland                 | John Harold Wrightson, Eng-<br>land         |
|     | George Reynolds Turner,<br>England                  | Johannes Cornelius Zuidmeer,<br>Cape Colony |
| 145 | Karl Hermann Heinrich Uff-<br>mann, India           |   |

20TH OCTOBER 1900.

- |    |   |   |
|----|---|---|
|    | Charles Henry Allen, Eng-<br>land           | William Evan M'Farlane,<br>England      |
|    | Martyn Cecil Beatty, Ireland                | John George M'Kenna, Scot-<br>land      |
|    | Arthur Digby Serrell Cooke,<br>India        | Kenmure Duncan Melville,<br>Scotland    |
|    | William Petrie Cormack, Scot.               | 15 Morgan Cadivor Morgan,<br>Wales      |
| 5  | Thomas Ashton Davies,<br>Wales              | David John Roberts, Wales               |
|    | Arthur William Fuller, Eng-<br>land         | Frederick England Robinson,<br>England  |
|    | Norman Glegg, Scotland                      | Elizabeth Thompson Selkirk,<br>Scotland |
|    | John Ligertwood Green, Scot-<br>land        | James Frederick Selkirk,<br>Scotland    |
|    | Patrick Stevenson Haldane,<br>Scotland      | 20 John Alfred Smith, Ireland           |
| 10 | Charles Edward Percival<br>Husband, Jamaica | Arthur William Wilson, Eng-<br>land     |
|    | Thomas Garnet Stirling Leary,<br>Ireland    |   |

26TH JANUARY 1901.

William Lockhart Gibson  
Anderson, Scotland  
Lesley Newton Hesketh Biggs,  
India  
Robert Allan Cameron, New  
Zealand

Angus M'Nab, New Zealand  
Charles Edward Pepper, Ire-  
land  
Koh Leap Teng, Straits  
Settlement

## Fellowships, Scholarships, Bursaries, and Prizes in Medicine.

### I.—FELLOWSHIPS.

*See note under Scholarships, page 176.*

#### I.—THE SYME SURGICAL FELLOWSHIP.

This Fellowship, of the annual value of about £102, and tenable for two years, is open to award to the Bachelor of Medicine and Master in Surgery, or Bachelor of Medicine and Bachelor of Surgery, of not more than three years' standing, who, in the opinion of the Examiners, has passed a creditable examination for these degrees, for the best Thesis on a Surgical subject giving evidence of original research, or practical talent, whether such Thesis be given in for Graduation or otherwise. The next award may be at the Graduation Ceremonial in July 1903. *See* Deed of Foundation, at p. 310 of CALENDAR for 1872-73. 1901.

#### II. THE GOODSIR MEMORIAL FELLOWSHIP.

This Fellowship was founded in 1872 by the subscribers to the fund for a memorial of the late Professor John Goodsir for the encouragement of the study of Anatomy and Physiology. It is of the annual value of about £100, tenable for two years, and is open to all Graduates in Medicine of the University of not more than three years' standing at the time of the competition, and to Licentiates of the Colleges of Physicians or Surgeons of Edinburgh of a like standing, who have attended within the University the same number of classes as are required for the Degrees of M.B. and Ch.B. It is awarded for the best Essay or Treatise containing results of original investigations in Anatomy, Human and Comparative, either Normal or Pathological, or in Experimental Physiology; Candidates may be examined *viva voce* or otherwise on the subject of their Essays or Treatises if the Examiners shall deem this desirable.

The next award may be made in July 1903, and competing Disserta-

tions must be lodged with the Professor of Anatomy not later than the 30th April previously. *See* Deed of Foundation at p. 314 of CALENDAR for 1872-73.

1901.

### III.—THE LECKIE-MACTIER FELLOWSHIP.

The Leckie-Mactier Fellowship, of the annual value of £80, is awarded to Bachelors of Medicine of not more than three years' standing, and is tenable for three years. The examinations comprise written reports and commentaries on medical, surgical, and gynecological cases in the University Wards in the Royal Infirmary, and written examinations in Midwifery, Medical Jurisprudence, and Public Health; also oral examinations in Medicine, Surgery, Midwifery, Medical Jurisprudence, and Public Health. Every holder of the Fellowship must, before the expiry of his tenure, transmit to, and if required read publicly in presence of the Medical Faculty, a communication embodying the result of original observation or historical research in some department of medicine. Next appointment may be made in November 1904. *See* Deed of Foundation at p. 365 of CALENDAR for 1880-81.

1901.

### IV. FREELAND BARBOUR FELLOWSHIP.

This Fellowship is of the value of £100, and is open to award, in each alternate year, to the Bachelor of Medicine and Bachelor of Surgery who has gained the highest collective marks in Anatomy, Physiology, and Pathology in the Professional Examinations, and who is prepared to devote not less than one year to original research in Midwifery or diseases of women, in any of the Laboratories or Practical Departments of the University of Edinburgh. The next award may be made in July 1902. *See* Deed of Foundation at page 517 of CALENDAR for 1899-90.

1900. *John Pender, M.B., Ch.B.*

### V. ALLAN FELLOWSHIP IN CLINICAL MEDICINE AND CLINICAL SURGERY.

This Fellowship, of about £40, is awarded annually, after competitive examination of the six candidates for the degrees of M.B., C.M., or M.B., Ch.B., who, after having attended in the University of Edinburgh the necessary qualifying courses in Clinical Medicine and Clinical Surgery, shall obtain the highest percentage of marks in these subjects at the final examination for these degrees. *See* Deed of Endowment and Regulations, page 833 of CALENDAR for 1899-1900.

1900. *George Scott Carmichael, M.B., Ch.B.*



## II.—FUNDS FOR RESEARCH, &amp;c.

## I. THE WILLIAM DICKSON TRAVELLING FUND.

This is a fund for the purpose of assisting Graduates of any Faculty, of not more than three years' standing, to travel for the purpose of study or research. For particulars, see page 190.

## II. THE EARL OF MORAY'S BEQUEST FOR THE PROMOTION OF ORIGINAL RESEARCH.

All Graduates and other Members of the University, "or other persons who have given satisfactory proof of General Education and fitness to engage in some special study or research," may apply for grants from this fund. In so far as the subject of the Research admits, the investigation shall be conducted in the Buildings of the University. For further particulars, see page 191. See Regulations, page 428 of CALENDAR for 1897-98.

## THE SWINEY LECTURESHIP ON GEOLOGY.

This Lectureship is in the patronage of the Trustees of the British Museum, is of the annual value of £144, and is open to Graduates in any of the Faculties of this University who have obtained their Degrees after Examination. For further particulars, see page 288.

## III.—SCHOLARSHIPS.

## I.—ETTLES SCHOLARSHIP IN MEDICINE.

This Scholarship was founded in 1868 by Miss Mary Ettles of Inverness, and is of the annual value of about £31, 5s. It is awarded annually to the Bachelor of Medicine and Master in Surgery of the University of Edinburgh, whom the Faculty of Medicine may consider the most distinguished of that year. See Deed of Foundation, at page 242 of CALENDAR for 1868-69.

1900. *Robert Ainslie Ross, M.B., Ch.B.*

## II.—SIBBALD MEDICAL SCHOLARSHIP.

This Scholarship is of the annual value of £40. *First*, The Scholarship is bestowed on, and held by, a Student in the Faculty of Medicine in the University of Edinburgh, *who does not hold any other Scholarship or Bursary*, and is tenable for three years, during each year the Scholar must complete an *Annus Medicus* required from Candidates for the degree of Bachelor of Medicine. *Second*, It is bestowed upon the Student obtaining the highest place by Competitive Examination, and is open to all Candidates who have not previously been Students of Medicine in any other School or University, and

who have attended Medical Classes in the University of Edinburgh, for *not less* than one Winter and one Summer Session, and for *not more* than one Winter and two Summer Sessions. The Competition Examination is in Chemistry, Botany, Natural History, and Physics, and is conducted in such manner as the Senatus Academicus may, in concurrence with the Trustees, prescribe. The next competition may take place in October 1903. Application to be made to Messrs MACKENZIE, INNES & LOGAN, W.S., 23 Queen Street, Edinburgh.

1900. *Ephraim Henderson, M.A.*

### III.—THOMSON SCHOLARSHIP.

The Thomson Scholarship, value £40, tenable for four years, open to matriculated students commencing their first Winter Session in Medicine. The examination is on Botany, Zoology, and Elementary Mechanics. The Scholarship is awarded to the candidate who shall obtain the highest number of marks in the examination. The Trustees, however, reserve power to themselves to withhold the appointment should none of the candidates obtain a sufficiently high percentage of the marks in the examination. Candidates must send in their names to the agents for the Trust before the first day of October in the year in which there is a competition for the Scholarship. Students of the name of Thomson or Traquair, or those who are natives of the town or county of Dumfries, or of the city of Edinburgh, have a preference. The next appointment may be made in October 1902. For further particulars, application to be made to Messrs Traquair, Dickson & Maclaren, W.S., 11 Hill Street, Edinburgh.

1898. *Thomas Nicol.*

### IV.—COLDSTREAM MEMORIAL MEDICAL MISSIONARY SCHOLARSHIP.

The Coldstream Memorial Medical Missionary Scholarship was founded in memory of the deceased John Coldstream, M.D., F.R.C.P.E. Value about £20, and tenable for five years. The holder must be a first year's Medical Student, who intends to devote himself to the life of a Medical Missionary at home or abroad. He must be approved of by the awarders, and pass the Preliminary Examination before beginning his studies. A preference is given to students connected with the Edinburgh Medical Missionary Society. A full copy of the conditions can be had on applying to John P. Coldstream, W.S., care of Messrs Mill, Bonar & Hunter, W.S., 15 Hill Street, Edinburgh. Next award may be in October 1900. See Conditions in CALENDAR for 1879-80, p. 357.

1900. *Alexander Macrae.*

## V.-XI.—VANS DUNLOP SCHOLARSHIPS.

*Seven Scholarships*, of £100 each, tenable for three years. Not more than one at a time can be held by the same person. The successful candidates for each of these Scholarships will be required to continue their medical studies in this University during their tenure of their Scholarships, and to graduate as M.B. and Ch.B. See Excerpt from Will of Dr Vans Dunlop, p. 380 of CALENDAR for 1880-81.

V. *One* is awarded to the Candidate who, at either the March or the preceding October Medical Preliminary Examination, has obtained the highest number of marks in the Subjects required to enable him to appear for a Professional Examination, provided (1) that he has not already passed the said Preliminary Examination; and (2) that, in the event of his having passed an equivalent examination and presenting himself for the Medical Preliminary Examination, he shall waive all right to admission to the Faculty of Medicine except through the ordinary Medical Preliminary Examination of this University. The next award will be made in March 1904.

1901. *James Jackson* and *Thomas B. Johnston*—equal.

VI. *One* is awarded at the end of the First Winter of Medical Study to the Student who, after having attended for the first time within the University a Systematic Course of Lectures on each of the subjects of Chemistry, Anatomy, and Physics, and who has not previously attended any course in Chemistry, or Anatomy, or Physics, which qualifies for Degrees in Medicine, or for a Licence in Medicine or Surgery, shall obtain the highest number of marks in an Examination in these subjects, specially conducted for the purpose. The Subjects of Examination in Anatomy will include the Skeleton; Joints; Muscular System; Heart and Great Vessels; General Arrangement of the Nervous System; Position of the Thoracic and Abdominal Viscera. The next award may be made at the end of March 1902.

1899. *Thomas Peebles* and *G. S. Skinner*—equal.

VII. *One* is awarded at the end of the first Summer Session of Medical Study to the Student who, after having attended for the first time within this University a Systematic Course of Lectures on each of the subjects of Botany and Zoology, and who has not previously attended any course in Botany or Zoology which qualifies for Degrees in Medicine, or for a Licence in Medicine or Surgery, shall obtain the highest number of marks in an Examination in these subjects specially conducted for the purpose. The next award made be made at the end of July 1902.

1899. *John Tait* and *Cameron R. Gibson, M.A.*—equal.

VIII. *One* is awarded at the end of the Second Winter of Medical Study to the Student who, after having attended within the University for the first time a Systematic Course in each of the subjects of Physi-

ology and Surgery, and who has not previously attended a Course of Physiology or Surgery which qualifies for Degrees in Medicine, or for a Licence in Medicine or Surgery, shall obtain the highest number of marks in an Examination in these subjects specially conducted for the purpose. The Subjects of the Examination in Physiology will embrace the Histology and Physiology of the Simple Tissues, and of the Organs concerned in Nutrition. The whole subject of Nutrition will be included, and also Animal Heat. The next award may be made at the end of March 1902.

1899. *A. B. Ross.*

*Prox. access.*, J. A. Ellerbek and B. P. Watson.

IX. *One* at the beginning of the Fourth Winter Session of Medical Study to the Student who, after having attended within the University the Systematic and Practical Instruction in the subjects of Anatomy and Physiology, and, having passed the Second Professional Examination, shall obtain the highest number of marks in an Examination in these subjects specially conducted for the purpose. The successful Candidate will be required to continue his studies in this University during the first two years of his tenure of the Scholarship, and at the end of the second year to graduate as M.B. and Ch.B.; and during the remaining year to prosecute original investigation in one or other of the Research Laboratories in the Faculty of Medicine. The next award may be made in October 1902.

1899. *Andrew Hunter.*

X. *One* at the beginning of the Fourth Winter Session of Medical Study to the Student who, after having attended within the University a Systematic Course in the Subject of Materia Medica (including Pharmacology), and, having passed the Second Professional Examination, shall obtain the highest number of marks in an Examination in that subject specially conducted for the purpose. The successful Candidate will be required to continue his studies in this University during at least two years of his tenure of the Scholarship, and at the end of the second year to graduate as M.B. and Ch.B.; and during the remainder of his tenure of the Scholarship to devote himself to original investigation in the Materia Medica Laboratory in the Faculty of Medicine. The next award may be made in January 1903.

1900. *William H. Prentice, M.A.*

XI. *One* to be awarded at the beginning of the Fifth Winter Session of Medical Study, to the Student who, after having attended within the University, the Systematic and Practical Courses in Pathology and the Systematic Courses in Medical Jurisprudence, and in Public Health, and having passed the Third Professional Examination, shall obtain the highest number of marks in an Examination in these subjects specially conducted for the purpose. The successful Candidate will be required to continue his studies and graduate as M.B. and Ch.B. in this Univer-

ity, during the first year of his tenure of the Scholarship, and to devote himself during the remainder of his tenure to original investigation in one or other of the Research Laboratories in the Faculty of Medicine. The next award may be made in October 1902.

1899. *R. A. Ross.*

## XII.—THE MURCHISON MEMORIAL SCHOLARSHIP.

This Scholarship consists of the annual proceeds of about £1000, awarded in alternate years in London and Edinburgh, for proficiency in Clinical Medicine. Candidates must be registered medical students who have attended for not less than five nor more than seven years at Hospitals and Classes at Edinburgh or London, recognised by the University of Edinburgh or the Royal College of Physicians of London. The competition in 1902 will be held in London.

1900. *Thomas Crisp English, L.R.C.P. (Lond.).*

## XIII.—STARK SCHOLARSHIP IN CLINICAL MEDICINE.

This Scholarship, of £112, less expenses, and tenable for one year, is for the encouragement of the study of Clinical Medicine. It is open to competition among all matriculated students of the University who are or have been in attendance at the University Class of Clinical Medicine, and to Bachelors of Medicine of the University of not more than eighteen months' standing who have attended this class. It is open every second year alternately with the competition in Edinburgh for the Murchison Memorial Scholarship. The Examination, oral and in writing, includes (a) Examination of Patients; (b) Questions on Therapeutics and Pathology; (c) Examination of Specimens. Each holder of the Scholarship is required to devote his time in the wards of the Professors of Clinical Medicine to original investigation or other work directly connected with Clinical Medicine; to report his proceedings every three months to the Professors of Clinical Medicine; and, within a reasonable time after the expiry of his tenure of the Scholarship, to present to the Faculty of Medicine a written statement of the results of his investigations or other work. It cannot be held along with any other Fellowship, Scholarship, or Bursary in a Scottish University. The next Competition will take place in July 1902. See Deed of Foundation at p. 427 of CALENDAR for 1884-85.

1900. *George Lyon, M.B., Ch.B.*

## XIV.—BUCHANAN SCHOLARSHIP.

This Scholarship, of the value of about £40, founded by Mrs. Jane Jack or Buchanan, Moray Place, Edinburgh, is awarded annually to the Graduate in Medicine of the year who has shown the highest proficiency in Midwifery and Gynecology, as evidenced in (1) the



Class Examinations of Midwifery and Diseases of Women and Children; (2) the Records kept by him of cases treated in the Gynecological Section of the University Class of Clinical Medicine in the Buchanan Ward of the Royal Infirmary, and (3) the Final Examination in Medicine for the Degree of M.B. The Scholar is required to act as non-resident Clinical Clerk in the University Gynecological Ward, and to give assistance in the Examination of Class Exercises. *See* Deed of Foundation, p. 707 of CALENDAR for 1894-95.

1900. *Frederic David Simpson, M.B., Ch.B.*

#### XV.—THE JAMES SCOTT SCHOLARSHIP.

This Scholarship, founded by Mrs Mary Ann Scott or Thomson of Hawick, of the value of £32, 10s., is awarded annually at the Graduation Ceremonial in Medicine in August for proficiency in Midwifery. The award is based upon the results of the Competitive Examinations in the Class of Midwifery, upon the character of the records of Cases of Midwifery attended by the Candidate at the Royal Maternity and Simpson Memorial Hospital, and upon the position obtained by him at the Final Examination for Degrees in Medicine. The Scholarship is for one year, but may, in special circumstances, be continued for another year. *See* Deed of Foundation, p. 410 of CALENDAR for 1883-84.

1900. *William Ernest Frost, M.B., Ch.B.*

#### XVI., XVII.—HOPE PRIZE SCHOLARSHIPS.

Two Hope Prize Scholarships in Chemistry, each of the annual value of about £30. For particulars, *see* under Scholarships in Science.

#### XVIII.—THE MOUAT SCHOLARSHIP IN THE PRACTICE OF PHYSIC.

This Scholarship, of the value of about £55, 4s. (partly in money and partly in the form of a bronze medallion), is awarded annually at the Graduation Ceremonial in Medicine, to the graduate in Medicine who shall have taken the highest place in the competitive Examinations in the Class of Practice of Physic (Medicine) in this University, and in the Oral and Written Examinations in that subject in the Final Examination.

The Scholar shall be bound during his year of tenure to pursue the study of Medicine either as resident in an Infirmary or Hospital, or in the University of Edinburgh, or other University or Medical School at home or abroad, and to present, at the close of such year, to the Professor of Practice of Physic, or to the Senatus Academicus, a Report of the work he has done in such Infirmary, Hospital, University, or Medical School. The money part of the Scholarship will only be paid



on the Senatus receiving a certificate from the Dean of the Faculty that the conditions of the Scholarship have been duly fulfilled.

1900. *Edward Ewart, M.B., Ch.B.*

#### XIX. MACKAY SMITH SCHOLARSHIP IN CHEMISTRY.

This Scholarship is of the annual value of £25, tenable for two years, and is open for competition to Students who have attended the Class of Chemistry in this University. The successful Candidate is bound to attend the Class of Chemistry, or to prosecute the study of Chemistry in the University during at least one year of his tenure of the Scholarship, in such way as the Senatus Academicus may direct or approve. The next Examination will take place in July 1902.

1900. *John Falconer, M.A.*

#### XX.-XXIII.—CRICHTON SCHOLARSHIPS FOR RESEARCH.

Four Scholarships, each of the value of £100, tenable for one year, with power of re-appointment for a second and for a third year, are open in rotation in the subjects of Anatomy, Physiology, Materia Medica, and Pathology, for the prosecution of Research by Graduates who have been Students of this University for not less than four years. The Scholarships in Materia Medica and Pathology will be open in 1901. Candidates are required to submit a sufficient description of the work they propose to undertake to the Dean of the Faculty of Medicine on or before 1st September. The Examination is both written and practical, bearing on Research Work. See Regulations, page 750 of CALENDAR for 1895-96.

1899. *David Waterston, M.B., C.M. (Anatomy).*

1900. *Duncan Forbes, M.B., C.M. (Pathology).*

#### XXIV.—HOULDSWORTH SCHOLARSHIP.

This Scholarship, founded by the Houldsworth Trustees for the purpose of promoting Research in Pharmacology in the Department of Materia Medica in the University, is of the annual value of about £46, and tenable for one year, with power to re-elect for a second, or even a third year if good work is being done by the scholar. It is awarded to a Graduate in, or Student of Medicine of the University, after such examination, competitive or otherwise, as may be deemed necessary. The scholar must, during his tenure, produce such evidence of his progress in Pharmacological investigation as may be required by the Professor of Materia Medica. For Deed of Foundation, see page 421 of CALENDAR for 1897-98.

1900. No award.

## III.—BURSARIES.

See note under Bursaries, page 160.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
I.	1864	Dr Abercromby, Cape Town.	£20 0 0	1	4	£20 0 0	Governors of George Heriot's Trust.
II.	1871	Dr J. R. Sibbald's Trustees.	{ About 150 0 0 }	5	3	30 0 0	Trustees of Dr J. R. Sibbald.
III.	1873	Dr Mackie's Trustees.	60 0 0	2	2	30 0 0	Professors of Fac. of Med. in Univ., Edin
IV.	1873	Mr Grierson of Ogc- castle's Trustees.	{ 60 0 0 } { 20 0 0 }	3 1	1 1	{ 20 0 0 } { 10 0 0 } { 10 0 0 }	{ Senatus.
V.	1878	Dr Andrew Thomson	200 0 0	8	4	25 0 0	Trus. of Dr Thomson
VI.	1878	William Mackenzie	32 10 0	4	1	8 2 6	Senatus.
VII.	1878	John Aitken Carlyle	56 0 0	2	1	28 0 0	Senatus.
VIII.	1882	Mrs Ronald of Liver- pool	80 0 0	2	...	About 40 0 0	Senatus.
IX.	16—	George Heriot. Re- modelled 1887	480 0 0	6	4	30 0 0	Governors of George Heriot's Trust.
X.	1890	Major Robert Orr Crichton of Lynn, M.D.	About 500 0 0	10	4	50 0 0	Senatus Academicus
XI.	1809	Dr Donald Grant, London.	180 0 0	2	4	90 0 0	Dr Grant's Trustees
XII.	1846	John Jamieson, Edin- burgh.	About 26 0 0	1	4	About 26 0 0	Principal and Two Professors.
XIII.	1883	Wm. Renton, Edin- burgh.	20 0 0	1	1	20 0 0	Professors of Mathe- matics, Natura Philosophy, Chem- istry, and Politica Economy.
XIV.	1886	Richard Allan. Feuar, Kelso.	90 0 0	3	3	About 30 0 0	Trustees of R. Allan
XV.	1889	Daniel Maclaurin, London.	62 10 0	1	4	62 10 0	Town Council.
XVI.	1897	M'Cosh (Graduates).	...	1	1	153 0 0	Senatus.
XVII.	1897	M'Cosh (Medical).	...	1	1	11 11 4	Senatus.

I. *Abercromby Bursary*—Open by competition, in the event of more than one candidate coming forward, to Students who have been educated in George Heriot's School, and have finished their course as Heriot Bursars, to aid them in further prosecution of their studies for any of the learned professions. Students in the Faculty of Medicine to be always preferred. Candidates are referred to the Treasurer of the Heriot Trust, 20 York Place, Edinburgh, before 15th September.

II. *Sibbald Bursaries*.—These Bursaries, each tenable for three years, are available to Students in the Faculties of Arts, Medicine, Law, or Divinity entering the University who have not previously attended any University in the United Kingdom or elsewhere, and who do not hold any other Bursary.

*Scholarship*, but no objection to a Candidate that he has, during the previous Summer Session, attended any of the Classes in the University of Edinburgh required by the Faculties of Medicine or Law. The examination is the same as the Preliminary and Bursary Examination in the Faculty of Arts at the commencement of each Winter Session. Application to be made to Messrs Mackenzie, Innes & Logan, W.S., 23 Queen Street, Edinburgh, before 15th September.

III. *Mackie Bursaries*.—These Bursaries are awarded to Students of Medicine of the University, one of which is open to Students who have completed their first *annus medicus*, and the other to Students who have completed their second *annus medicus*, and who are, in the opinion of the Faculty of Medicine, in such pecuniary circumstances as to require assistance. In the event of no appointment having been made to either Bursary on any occasion when it is vacant, the Senatus may, on the recommendation of the Faculty of Medicine, appoint any Candidate to the vacant Bursary who has completed either his first or his second *annus medicus* and who otherwise satisfies the requirements of tenure. *Bursars*—1900, *first year*, R. S. Enever Todd; *second year*, no award.

IV. *Grierson Bursaries*.—Candidates from the parishes of Crawford or Leadhills, about to commence their Medical Curriculum, who have passed in the University of Edinburgh a satisfactory examination in the preliminary subjects required by the Regulations for Graduation in Medicine, who have been diligent students, and who require pecuniary aid to enable them to pursue their studies, have a preference. In the case of more candidates than one, the Bursary will be awarded to the best qualified, on examination in the subjects above referred to.

Failing the appointment of preferential candidates, the Bursaries will be tenable for periods of one year only, in manner following, viz. :—*One* will be awarded to the student who, not having completed his twenty-first year, shall pass the best examination of the year in the subjects of the preliminary examination, provided (1) that he has not already passed the said preliminary examination; and (2) that, in the event of his having passed an equivalent examination and presenting himself for the Medical Preliminary Examination, he shall waive all right to admission to the Faculty of Medicine except through the ordinary Medical Preliminary Examination of this University. *One* will be awarded by competitive examination to the student beginning the Second Winter Session, who having already passed the Preliminary Examination required for Graduation in Medicine, shall pass the best examination in the subjects of Chemistry, Botany, Natural History, and Physics. *One* will be awarded by competitive examination to the student beginning the Third Winter Session who, having already passed the First Professional Examination, shall pass the best examination in the subjects of Anatomy and Physiology. *One* will be awarded by competitive examination in *Materia Medica* at the beginning of the Fourth Winter Session. *One* will be awarded by competitive examination in Pathology at the beginning of the Fifth Winter Session. *Bursars*—1900, Preliminary Subjects, *Murdo Maclean*; First Professional Subjects, *James Craw*; Anatomy and Physiology, *James M. Kirkness* and *W. C. Morton, M.A.*—equal; *Materia Medica*, *H. H. Roberts*; Pathology, *R. V. Clark, M.A.*

V. *One Thomson Bursary* is awarded at each of the Preliminary Examinations

held in Spring and Autumn, to the Candidate who, being about to commence 1 Curriculum, takes the highest place in the Medical Preliminary Examination provided (1) that he has not already passed the said Preliminary Examination and (2) that, in the event of his having passed an equivalent examination on presenting himself for the Medical Preliminary Examination, he shall waive a right to admission to the Faculty of Medicine except through the ordinary Medical Preliminary Examination of this University. Students of the name of Thomson or Traquair, or those who are natives of the town or county of Dumfries, or the city of Edinburgh, have a preference. Candidates must enter for the Preliminary Examination in Autumn or Spring, and those claiming a preference must intimate their names to Messrs Traquair, Dickson & Maclaren, W.S., 11 H Street, Edinburgh, the agents for the Trust (from whom further particulars may be obtained), at least one clear week before the Examinations. *Bursars*—1899-1900, *H. R. Macintyre*; *James Dundas*. 1900-1901, *David Mathieson*; *J. A. Alexander*.

VI. *Mackenzie Bursaries*, open to Students of Anatomy Classes, of any year who shall display the greatest industry and skill in Practical Anatomy during the Winter Session. See CALENDAR for 1879-80, p. 353. *Bursars*—1900-1901, *A. G. Coullie* and *W. A. Wilson Smith*—equal; *W. J. Fraser* and *G. F. Landon*—equal.

VII. *John Aitken Carlyle Bursaries*, one is awarded at the end of every Winter Session to a first year Student for proficiency shown in the ordinary class examinations in Anatomy and Chemistry, the other to a second year's Student for proficiency shown in the ordinary class examinations in Anatomy and Physiology. See CALENDAR for 1879-80, p. 350. *Bursars*—1901, Senior, Junior, *James Young*; prox. access., *John Smith*.

VIII. The *Anderson Bursaries* have been founded by Mrs Ronald of Liverpool, and will come into operation on the death of an annuitant. For Deed of Foundation, see CALENDAR 1882-83, p. 396.

IX. The *Heriot Bursaries* are for Students unconnected with the Hospital entering upon a regular Curriculum with a view to graduation. For remodelled scheme, see CALENDAR, 1887-88, p. 498. For subjects of Examination, &c. see under Bursaries open in Faculty of Arts.

X. *Crichton Bursaries*.—Two of these Bursaries are open annually—one in Autumn and one in Spring—to Students entering the Faculty of Medicine of this University who have been born in Scotland. The subjects of Examination are Latin, Greek, French, German, Mathematics, Logic, and Moral Philosophy. Each Bursary is of the annual value of £50, tenable for four years, provided the Bursars continue Students of the Medical Faculty of this University. See Excerpt from Deed, p. 540 of CALENDAR for 1891-92, and Regulations, 749 of CALENDAR for 1895-96. *Bursar*—1899—*Henry Speirs*, *R. Donaldson*. *M.A.* 1900—*John MacNab*, *Thomas Davidson*.

XI. The *Grant Mortification* is for Students of the University of Edinburgh of the name of Grant. The holders may attend the Arts, Medical, Divinity, Law Classes. Application for information may be made to Messrs Mackenzie Innes & Logan, W.S., 23 Queen Street, Edinburgh.

XII. The *Jamieson Bursary* is for the benefit of the sons of schoolmasters, farmers, mechanics, and labourers, and other persons born and residing within any one of the following parishes—viz., Crawfordjohn, Crawford, united parishes of Lamington and Wandell, united parishes of Wiston and Robertson, Culter and Biggar. The Bursar may attend Classes in any of the Faculties.

XIII. The *Renton Bursary*, founded by the late William Renton. Candidates must attend one or more of the classes of Natural Philosophy, Mathematics, Chemistry, or Political Economy, and must show that they require pecuniary aid. It cannot be held by any one under the age of sixteen or above twenty-one, or with another Bursary of the value of £30 or upwards. The Examination is in English and Mathematics, as for the First Year Open Bursaries in Arts.

XIV. *Allan Bursaries*.—These Bursaries are available to Students attending classes in any of the Faculties of Arts, Science, Medicine, or Law, in the University of Edinburgh, and are tenable for three years or for such part of that period as the Bursar shall remain a Student at the University. In nominating Candidates for presentation to the Bursaries, care will be given to prefer such as have been born in the parish of Kelso, provided they are qualified by their previous education for entering the University. Apply to P. Stormonth Darling, Esq., writer, Kelso.

XV. *Maclaurin Bursary*. This Bursary, tenable for four years, is by the will of the founder to be called the “Maclaurin Bursary,” and is restricted to Students of the Founder’s name of Maclaurin (or in Gaelic orthography “Maclalhrin”). It may be held in any of the Faculties. See Deed of Foundation, p. 544 of CALENDAR for 1890-91.

XVI., XVII. *The M’Cosh Graduate’s Bursary and M’Cosh Medical Bursary*. Each Bursary is tenable for one year, during which the holder will be required to prosecute Study or Research in a Medical School or Medical Schools of Europe, it being in the discretion of the Faculty of Medicine to award both Bursaries to the same person. Applications for the Bursaries must be made to the Dean of the Faculty of Medicine not later than the end of the third week of July, and must be accompanied with a statement of the name or names of the Medical School or schools intended to be visited, of the time proposed to be spent at each school, and of the nature of the study or special work proposed to be engaged in. Bachelors of Medicine and Bachelors of Surgery are eligible for appointment during one year after receiving these degrees. In considering the claims of candidates, the Faculty of Medicine will take into account not only their professional attainments and ability, but also the knowledge they possess of foreign languages; and it shall be in the option of the Faculty to satisfy themselves with regard to his knowledge by the examination of candidates. Candidates who already hold Bursary, Scholarship, or Fellowship will not be disqualified except in cases where the Bursary, Scholarship, or Fellowship requires, as a condition of tenure, the prosecution of Original Research, or some other condition which may be interfered with by the holding of a M’Cosh Bursary. Holders of the Bursaries will be required at the end of each three months to transmit to the Dean of the Faculty of Medicine a report of the manner in which they are pursuing their studies, or of the progress being made in any special work in which they are engaged.

1900. *John Charles Mitchell, D.Sc., M.B., C.M.*



*IV.—PRIZES.**See note under Bursaries, page 160.***I.—NEIL ARNOTT PRIZE FOR EXPERIMENTAL PHYSICS.**

This Prize, of the value of about £37, 10s., presented to the University by Dr Neil Arnott of London, is awarded annually in October to the Candidate who shall pass with the greatest distinction the Ordinary Examination in Natural Philosophy for the Degree of M.A., with such additional Examination in Experimental Physics as the Examiners may require. Candidates must have been Students of Medicine of this University during either a summer or a winter session; and the successful candidate must continue a Student of Medicine at this University during the next Winter Session, failing which, the prize will be forfeited and assigned to the competitor next in merit. No student can appear for examination after the completion of his third *annus medicus*; and no candidate shall be allowed to offer himself more than once.

In the event of a competitor, qualified as above, not coming forward, the prize will be awarded to a Candidate for a Degree in Arts who shall pass with most distinction the ordinary examination in Natural Philosophy. *See Deed of Foundation at p. 274 of CALENDAR for 1870-71.*

*1901 Alexander Macrae.***II.—THE ROBERT WILSON MEMORIAL PRIZE.**

This Prize was founded by John Wilson of South Bantaskine, in memory of his son, Robert Wilson, and is of the value of £7, 16s. in money and a bronze medal. It is annually awarded at the close of the Winter Session to the student in the senior Chemistry Class who takes the highest honours. *See Deed of Foundation at p. 351 of CALENDAR for 1876-77.*

*1901. James Watson.***III.—THE ELLIS PRIZE FOR PHYSIOLOGY.**

This Prize consists of the proceeds of a sum of £500 bequeathed by the late Daniel Ellis, Esq., to the Principal and Faculty of Medicine of the University of Edinburgh, accumulated for three or five years. It is awarded for the best Essay or Treatise on some subject of Animal or Vegetable Physiology proposed by the Faculty for competition to Students or Graduates of not more than five years' standing.

*1901.***IV.—PRIZES FOR THESES.**

Gold Medals, each of the value of £10, are awarded annually on the day of graduation to Doctors of Medicine whose Theses are deemed worthy of that honour.



V.—THE WIGHTMAN PRIZE IN CLINICAL MEDICINE.

This Prize of £12 was founded by Mrs E. Wightman, in memory of her son, J. T. Wightman, M.B., C.M., and is annually awarded at the close of the Summer Session to the student attending the Class of Clinical Medicine for the best Dissertation on any subject presented by the Faculty of Medicine, or for the best Report and Commentary on cases which have during the previous Winter and Summer Sessions been treated in the University Clinical Wards in the Royal Infirmary. Three months' notice of subject is given by the Faculty of Medicine. *See* Deed of Foundation at p. 348 of CALENDAR for 1876-77.

The Prize, which is open to members of the Clinical Class of either Winter 1900-1901 or Summer 1902, will be awarded for the best report and commentary on cases. The Essays to be given in before 6th July.

1900. No award.

VI.—THE BEANEY PRIZE.

This Prize of £32, 10s., was founded in 1878 by James George Beane, Esq. of Melbourne. It is awarded at the Graduation Ceremonial in Medicine to the Graduate in Medicine and Surgery of the year who, having attended within the University courses on Anatomy, Surgery, and Clinical Surgery qualifying for Graduation, obtains the highest number of marks during his examinations in these subjects for the Degrees of Bachelor of Medicine and Master in Surgery. The Senatus has the power of withholding the Prize in the event of no Student passing the above examinations with sufficient merit. *See* Deed of Foundation at p. 371 of CALENDAR for 1878-9.

1900. *George Scott Carmichael, M.B., Ch.B.*

VII.—THE CAMERON PRIZE.

This Prize was founded in 1878 by the late Dr Andrew Robertson Cameron, of Richmond, New South Wales, with a sum of £2000. The regulations were remodelled by the Educational Endowments (Scotland) Commission, and the annual proceeds, which, after defraying the necessary expenses, amount to about £80, may be awarded annually to a person who in the course of the five years immediately preceding has made any highly important and valuable addition to Practical Therapeutics. The Prize-man is required to deliver a lecture or course of lectures on the addition to Practical Therapeutics so made by him, or to publish an account of such addition in such manner as the Senatus may prescribe. The prize will not be awarded if, in the opinion of the Senatus, no addition to Practical Therapeutics has been made within the said period of five years of sufficient importance and value to justify the awarding of the prize. The prize is awarded annually at the Graduation Ceremonial in August. *See* Remodelled Regulations, p. 497 of CALENDAR for 1888-89.

1900. *W. M. Haffkine, C.I.E., for his work in preventive inoculation for Plague.*

## VIII.—THE DOBBIE SMITH PRIZE IN BOTANY.

This prize, which consists of a Gold Medal, is open to competition each alternate year to all Matriculated Students of the year of the award, for an Essay on a Botanical subject. The subject of the next competition is an original investigation "On the Structure, Development, and Life History of any British Flowering Plant"; and the memoir is to be accompanied with a series of illustrative specimens. Competing Essays to be sent to the Dean of the Faculty of Medicine on or before the 1st July 1901. The prize will be awarded to the successful competitor at the Graduation Ceremonial in July 1901.

## IX.-XIX.—THE GUNNING VICTORIA JUBILEE PRIZES.

Dr Gunning, of Edinburgh and Rio de Janeiro, has founded Eleven Post-Graduation Prizes of the value of £50 each, viz.:—(1) The Monro prize for Anatomy; (2) The Bell prize for Physiology; (3) The Edward Forbes prize for Zoology, &c.; (4) The Hutton Balfour prize for Botany; (5) The Joseph Black prize for Chemistry; (6) The Christison prize for Materia Medica; (7) The Lister prize for Surgery; (8) The Gregory prize for Practice of Physic; (9) The John Thomson prize for Pathology; (10) The Simpson prize for Obstetrics; (11) The Alison prize for Forensic Medicine and Public Health. Candidates must be either Bachelors of Medicine or Bachelors of Science of this University of not more than three years' standing. The prizes will be awarded with the approval of the Senatus for (1st) either (a) Competitive Essays written specially for the prizes, or (b) Theses submitted for Graduation; or (2nd) for original research conducted under supervision of the Professor in the department in which the prize is awarded. Two prizes will be awarded annually in the following rotation, viz.:—Chemistry, Practice of Physic, Physiology, Botany, Surgery, Pathology, Zoology, Materia Medica, Obstetrics, Public Health and Forensic Medicine, and Anatomy. Competitive Essays are required to be lodged with the Dean of the Faculty of Medicine on or before 30th April of the year in which each prize is to be awarded, and the successful competitors will be announced annually at the Graduation Ceremonial in Medicine.

1900. *Ernest Francis Bashford, M.B., Ch.B. (Materia Medica).*

*Alfred Charles Sandstein, M.B., Ch.B. (Obstetrics).*

## XX.—ANDERSON HENRY PRIZE.

The Prize was founded by Isaac Anderson Henry of Woodend, and consists of the proceeds of a sum of £300 accumulated for three years. It is awarded for the best and approved essay on a botanical subject proposed by the Professor of Botany, the Curator of the Royal Botanic Garden, and the President of the Botanical Society of Edinburgh, for competition to students in the Class of Botany in the University of

Edinburgh, during any of the three years preceding the date of the award. The next award may be made in August 1901. Competing Essays to be sent to the Dean of the Faculty of Medicine on or before 1st July 1900.

1900. *Cameron Robertson Gibson.*

#### XXI.—MILNER FOTHERGILL MEDAL IN THERAPEUTICS.

This Medal, of the value of about £20, is awarded biennially. It is open for competition to Graduates in Medicine of the University, who have been members of the Class of Materia Medica in the University, for the best essay which shall include a description of original research made by the Candidate on a Pharmacological or Therapeutic subject, preference being given to a subject relating to Dietetics. *See* Deed of Foundation, p. 542 of CALENDAR for 1891-92. The next award may be made at the Graduation Ceremonial in August 1901. Essays to be lodged with the Professor of Materia Medica on or before 30th April 1901.

1901.

#### XXII.—PATTISON PRIZE IN CLINICAL SURGERY.

This Prize, of about £10, 10s., is awarded annually to the Student of the University Class of Clinical Surgery who shall write the best Report and Commentary on cases treated in the University Surgical Wards during the Academic Year. The Essays to be given in before 6th July.

1900. No award.

### FELLOWSHIPS, SCHOLARSHIPS, BURSARIES, AND PRIZES OPEN TO COMPETITION IN THE FACULTY OF MEDICINE IN 1901-1902.<sup>1</sup>

*See note under Scholarships, page 176.*

For further information, and for information regarding other Scholarships, Fellowships, Bursaries, and Prizes, see CALENDAR, where full information regarding the conditions of tenure and the values are given.

#### I. FELLOWSHIPS.<sup>1</sup>

1. *The Leckie-Mactier Fellowship*, No. III., page 420. Names of Competitors to be entered on or before 15th October.

2. *The Allan Fellowship in Clinical Medicine and Clinical Surgery*, No. V., page 420.

<sup>1</sup> *N.B.*—The values of the Fellowships, Scholarships, Bursaries, and Prizes are subject to variation consequent on the rise or fall of the rate of interest, &c. No Candidate will be allowed to hold the same Fellowship, Scholarship, Bursary, or Prize more than once.

## II. FUNDS FOR RESEARCH, &c.

1. *The William Dickson Travelling Fund*, No. I., page 421. Applications on Special forms to be obtained at the Matriculation Office, must be lodged with the Secretary of Senatus on or before 15th March annually.

2. *Earl of Moray Fund for the Promotion of Original Research*, No. II., page 421.

## III. SCHOLARSHIPS.<sup>1</sup>

1. *The Stark Scholarship in Clinical Medicine*, No. XIII., page 425. The next Competition will take place in July 1902.

2. *Vans Dunlop Scholarships*, of £100 each, tenable for three years. Not more than one at a time can be held by the same person. The successful candidates for each of these Scholarships will be required to continue their medical studies in this University during their tenure of their Scholarships, except as aftermentioned, and to graduate as M.B. and Ch.B.

(1) *Vans Dunlop Scholarship in Botany and Zoology*, No. VII., page 423. The next competition will take place in July 1902. Names of candidates to be sent in to the Dean of the Faculty of Medicine on or before 1st July.

(2) *Vans Dunlop Scholarship in Chemistry, Anatomy, and Physics*, No. VI., page 423. The next competition will take place at the end of March 1902. Names of Candidates to be sent in to the Dean of the Faculty of Medicine on or before 15th March.

(3) *Vans Dunlop Scholarship in Physiology and Surgery*, No. VIII., page 423. The next competition will take place in March 1902. Names of Candidates to be sent in to the Dean of the Faculty of Medicine on or before 15th March.

(4) *Vans Dunlop Scholarship in Anatomy and Physiology*, No. IX., page 424. The next competition will take place in October 1902. Names of Candidates to be sent in to the Dean of the Faculty of Medicine on or before 1st October.

(5) *Vans Dunlop Scholarship in Materia Medica*, No. X., page 424. The next competition may take place in January 1903. Names to be sent in to the Dean of the Faculty of Medicine on or before 15th December 1902.

(6) *Vans Dunlop Scholarship in Pathology, Medical Jurisprudence, and Public Health*, No. XI., page 424. The next competition will take place in October 1902. Names of Candidates to be sent to the Dean of the Faculty of Medicine on or before 1st October.

3. *The Mouat Scholarship in Practice of Physic*, No. XVIII., page 426.

4. *The Thomson Scholarship*, No. III., page 422. The next competition will take place in October 1902, on a day to be afterwards

<sup>1</sup> See footnote, page 435.

announced. For further particulars, apply to Messrs Traquair, Dickson & Maclaren, W.S., 11 Hill Street, Edinburgh, the Agents for the Trustees, before 20th September.

5. *The Murchison Memorial Scholarship*, No. XII., page 425. The competition is open to Candidates from London and Edinburgh, and in 1902 will take place in London.

6. *The Buchanan Scholarship*, No. XIV., page 425.

7. *The James Scott Scholarship*, No. XV., page 426.

8. *The Ettles Scholarship in Medicine*, No. I., page 421.

9, 10. *Two Hope Prize Scholarships*, No. X., page 285.

11, 12. *Two Crichton Scholarships for Research*, No. XX., page 427. The Examinations are both written and practical. Candidates are required to intimate their names, and to give a sufficient description of the Research work they propose to undertake, to the Dean of the Faculty of Medicine on or before 1st September.

13. *The Houldsworth Scholarship*, No. XXIV., page 427.

#### IV. BURSARIES.<sup>1</sup>

*Town Council Bursaries.*—Candidates for Bursaries in the gift of the Town Council, a number of which are vacant (and some of which may be held in the Faculty of Medicine), are referred to the "*City Clerk, Council Chambers, Edinburgh*," to whom early application should be made.

1. *One Sibbald Bursary*, No. II., page 428.

2, 3. *Two Thomson Bursaries*, No. V., page 430. Candidates claiming a preference must send their names to Messrs Traquair, Dickson & Maclaren, W.S., 11 Hill Street, Edinburgh, one clear week before the Examination.

4-8. *Five Grierson Bursaries*, No. IV., p. 429. The competition for the Bursary in Preliminary subjects will take place at the Preliminary Examinations in September and March, and for the Second, Third, Fourth, and Fifth year Bursaries on Thursday 10th, Friday 11th, and Saturday 12th October 1901, at hours to be afterwards announced. Names of Candidates to be entered on or before 1st October.

9, 10. *Two John Aitken Carlyle Bursaries*, No. VII., page 430.

11-14. *Four Mackenzie Bursaries*, No. VI., page 430.

15. *Renton Bursary*, No. XIII., page 431. Names of Candidates to be entered at the Secretary's Office, on or before 18th September.

16, 17. *Two Crichton Bursaries*, No. X., page 430.

18. *The M'Cosh Graduates' Bursary and M'Cosh Medical Bursary*, Nos. XVI. and XVII., page 431.

19. *One Mackie Bursary*, No. III., page 429. The next award may be made at the commencement of the Winter Session 1901-2. Applications to be made to the Dean of the Faculty of Medicine on or before the 1st October 1902.

<sup>1</sup> See footnote, page 435.



20-23. *The Buchanan Society gives Four Bursaries. See under Bursaries in Faculty of Arts open in October 1901.*

*Competitors for the above Fellowships, Scholarships, and Bursaries, excepting those awarded for the subjects of Preliminary Examination, must have studied the subjects of Examination at the University of Edinburgh. No Fellowship, Scholarship, or Bursary, with the exception of the Ettles Scholarship, can be held along with any other Fellowship, Scholarship, or Bursary.*

## V. PRIZES.<sup>1</sup>

*The Medical Faculty Medals.*—Gold Medals are given on the day of Graduation to Doctors of Medicine whose Theses are deemed worthy of that honour.

1. *The Neil Arnott Prize, No. I., page 432.*
2. *The Beaney Prize, No. VI., page 433.*
3. *The Cameron Prize, No. VII., page 433.*
- 4, 5. *The Gunning Victoria Jubilee Prizes in Chemistry and Practice of Physic, No. IX., page 434.* Essays, Theses, or descriptions of researches are required to be lodged with the Dean of the Faculty of Medicine on or before 30th April 1902.
6. *The Wightman Prize, No. V., page 433.* The Essays to be lodged with the Dean of the Faculty of Medicine on or before the second Monday in July.
7. *The Pattison Prize, No. XXII., page 435.* The Essays to be lodged with the Dean of the Faculty of Medicine on or before the second Monday in July.
8. *The Milner Fothergill Medal in Therapeutics, No. XXI., page 435.* The next award may be made at the Graduation Ceremonial in August 1902. Essays to be lodged with the Professor of Materia Medica on or before 30th April 1902.
9. *The Robert Wilson Memorial Prize, No. II., page 432.*
10. *The Lord Rector's Prize, No. I., page 195.*
- 11, 12, 13. *The Trustees of Gray's Prize Essay Fund, No. VII., page 195.*

## LECTURESHIP.

*The Swinney Lectureship on Geology, value £144 per annum, tenable for five years, is open to Graduates of the University of Edinburgh. It is in the patronage of the Trustees of the British Museum.*

All holders of Fellowships, Scholarships, and Bursaries in the Faculty of Medicine must annually attend at least two of the Classes necessary for the Degrees of M.B. and Ch.B., and must present themselves for the several Examinations necessary for these Degrees at the proper periods in the Curriculum.

<sup>1</sup> See footnote, page 435.



Holders of Fellowships, Scholarships, or other pecuniary awards implying original Research on the part of the holder, are not allowed to assume any other office, but must devote their whole time to the Research authorised by the Senatus.

Each Fellow, Scholar, Bursar, or Prizeman, when he applies to the Factor for payment, must produce a Certificate signed by the Dean, attesting his regular attendance on the proper Classes, &c., or otherwise that he has fulfilled the conditions attached to the Foundation.

Certificates, in terms of this regulation, will be given to Bursars, by the *Dean of the Faculty of Medicine*, after 14th November; also at the end of the Session. In applying to the Dean for the Certificate, Bursars must present their Class Cards for the Session, and also all Class Certificates and Honours Certificates obtained since the last payment. Payments are made by the University Factor, Mr Henry Cook, W.S., 61 North Castle Street, Edinburgh, on and after 15th November for the Martinmas payments, and on and after 19th May for the Whitsunday payments,—between 10 and 3 o'clock.

*N.B.—Bursars, Scholars, and Fellows who desire to resign should at once announce this to the Dean and to the Factor. They must apply to the Factor for the instalments due to them within three months after they have become payable, otherwise they will be regarded as having resigned.*

A. R. SIMPSON, M.D.,  
*Dean of the Faculty of Medicine and Professor  
of Midwifery.*

## Faculty of Music.

Dean—Professor NIECKS, Mus. D.

—o—

STUDENTS who do not intend to graduate in Music may, without matriculating or passing any Preliminary Examination, attend any of the Classes on payment of the Five Shillings University Entrance-Fee, besides the Class Fees.

Those desiring to graduate must pass the Preliminary Examination, and must Matriculate before enrolling in any Class if they wish the Lectures to count.

The Classes, open both to men and women students, will meet as undernoted. They will meet for the last time before the Christmas Vacation on Friday, 20th December 1901; will re-assemble on Tuesday, 7th January 1902, and will be closed on Thursday, 18th March 1902. The Graduation Ceremonial in Arts, &c., will be held on Friday, 11th April 1902.

## Programme of Classes.

WINTER SESSION, 1901-1902.

PROFESSOR NIECKS.

Lectures, Theoretical and Practical Instruction, and Concerts, in the Winter Session of 1901-1902 :—

### 1. HISTORY OF MUSIC.

History of Music, especially of the last two Centuries.

Lecture I.—Music in the Middle Ages.

Lecture II.—Music in the time of the Renaissance.

Lecture III.—Music in the 17th Century.

Lectures IV.-XX.—Music in the 18th and 19th Centuries.

Once a week (Thursdays, 3-4), beginning 17th October. Twenty Lectures. Fee, One Guinea.

### 2. MUSICAL ANALYSIS.

A Practical and Historical Review of the Fundamentals and Essentials of Music.

Once a week (Mondays, 3-4), beginning 14th October. Twenty Lectures. Fee, One Guinea.

### 3. HARMONY.

Twice a week (Tuesdays and Fridays, 3-4), beginning 15th October. Fee, Two Guineas.

4. ADVANCED HARMONY.

Twice a week (Tuesdays and Fridays, 4-5), beginning 15th October. Fee, Two Guineas.

5. COUNTERPOINT AND COMPOSITION.

Once a week (Mondays, 4-5), beginning 14th October. Fee, Two Guineas.

6. SERIES OF HISTORICAL CONCERTS.

Fee for these Concerts, Half-a-Guinea. Those attending any of the Music Classes are admitted free.

EXAMINERS FOR DEGREES.

Professor Niecks, Sir Alexander C. Mackenzie, and the Examiners in English, French, Italian, and German for M.A. Degree.

MUSIC CLASS-ROOM LIBRARY.

The Reading Room of this Library is open for the consultation and study of musical works and books on music to those attending the Music Classes, daily, except Saturday, from 2 to 5 o'clock.

MUSEUM.

The Museum of Musical and Acoustic Instruments is open to Music Students.

MATRICULATION FEE, &c., page 27.

UNIVERSITY ENTRANCE FEE FOR NON-MATRICULATED STUDENTS, page 29.

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## Regulations for Graduation in Music.

I. Two degrees in Music are conferred by this University, viz., Bachelor of Music (Mus. B.), and Doctor of Music (Mus. D.).

I. PRELIMINARY EXAMINATION.

II. 1. Every Candidate for the degree of Mus. B. must pass a preliminary examination in :— (1) English, including Geography and British History ; (2) Elementary Mathematics or Elementary Physics or Logic ; (3) any two of Latin, Greek, French, German, and Italian, but one at least must be a modern language.

2. The extent and standard of the preliminary examination is determined by the Senatus.

3. A degree in Arts not being a degree *honoris causâ tantum*, in any University of the United Kingdom, or in any Colonial or Foreign University, specially recognised for the purpose by the University

Court, after consultation with the Senatus, exempts from the preliminary examination; and the Senatus has power to determine what examinations, other than those for the degree mentioned, will be accepted in whole or in part in place of the preliminary examination.

## II. BACHELOR OF MUSIC.

### *University Attendance.*

III. Candidates for the degree of Mus. B. must attend, in the University of Edinburgh during a whole Winter Session, a course or courses of instruction extending in all to not less than eighty Lectures, and including a course on the History of Music

## III. FIRST PROFESSIONAL EXAMINATION.

IV. There is a First Professional Examination in Music in the following subjects:—

- (1) Singing or performing upon some Musical Instrument.
- (2) Reading at Sight.
- (3) Elements of Music, including Musical Modes, and Scales, Notation, Measure, and *Tempo*.
- (4) Harmony in not more than four parts.
- (5) Elementary Counterpoint.
- (6) Form: Sonata, Rondo, Fugue, and Minor Structures.
- (7) Outlines of the History of Music.

The Ear Test will be applied to every Candidate.

## IV. SECOND PROFESSIONAL EXAMINATION.

V. There shall be, at least one year after the candidate has passed the First Professional Examination, a second Professional Examination in Music and in Literature in the following subjects:—

- (1) One of the following languages not already taken in the preliminary examination—French, German, Italian.
- (2) Rhetoric and English Literature (including Prose Composition and a knowledge of Metrical Rules).
- (3) Harmony in not more than five parts.
- (4) Advanced Counterpoint.
- (5) Canon in two parts, and Imitation and Fugue in not more than four parts.
- (6) Form (Description of Structure and Character of Musical Forms, and Analysis of Musical Works).
- (7) Elements of Instrumentation (Compass, &c., of the Orchestral Instruments, and of the Organ and Pianoforte).
- (8) Critical Knowledge of certain prescribed Scores.
- (9) Playing at Sight from easy Vocal and Instrumental Scores, and from Figured Bass.
- (10) The History of Music.
- (11) Acoustics in so far as connected with the Theory of Music, and Physiology of the Vocal Organs.

Each Candidate will also be required to submit the following exercises composed by himself :—

- (a) A Solo Song with Pianoforte Accompaniment.
- (b) A Four-part Vocal Composition.
- (c) An Instrumental Composition (other than a Dance) for the Pianoforte or Organ, or for any Stringed or Wind Instrument with Pianoforte or Organ Accompaniment.

The extent and standard of examination is fixed by the Senatus. The examination is partly written and partly oral and practical.

#### V. DOCTOR OF MUSIC.

V. Bachelors of Music of this University, of not less than three years' standing, and not less than twenty-five years of age, may offer themselves for the degree of Mus. D. under the following regulations :—The degree is given in three Departments, those of (1) Composers ; (2) Executants ; (3) Theorists or Historians ; and Candidates may present themselves in one or more Departments.

VI. (1) Candidates for the degree of Mus. D. as Composers must submit a prescribed number of Vocal and Instrumental Compositions in the larger forms (such as Oratorio, Opera, Cantata, Symphony, Sonata, Overture). Each work must be the original and unaided composition of the Candidate, and must be accompanied by a declaration to that effect signed by the Candidate.

(2) Candidates will be examined in the following subjects :—

- (a) The more recondite Contrapuntal Forms—Fugal Writing in more than four parts, &c.
- (b) Instrumentation, including prescribed books on the subject.
- (c) The works of the great Composers from Palestrina onwards.

VII. (1) Candidates for the degree of Mus. D. as Executants will be required to show their special skill in the execution of Solo and *ensemble* works in different styles. The works will be selected partly by the Candidates and partly by the examiners.

(2) The Candidates will be examined in sight-reading, and must give evidence of their power of playing Orchestral Scores, and will be required to invent Transitions and to modulate from one Key and Piece to another. They will further be required to pass an examination on the History and Literature of their special instrument, and on the method of teaching that instrument.

VIII. (1) Candidates for the degree of Mus. D. as Theorists or Historians must present one or more treatises on Theoretical or Historical subjects, which must be the result of research and original thought, not mere abstracts or compilations of existing works. They must be accompanied by a declaration signed by the Candidate that they are his own unaided work.

(2) Candidates will also be required to pass an examination (a) in the Theory and (b) in the History of Music.

The examination will be on a higher standard in the subject which the Candidate selects as his specialty.

IX. The examiners for the degree of Mus. D. are the same as for the degree of Mus. B.

It is competent to the University Court of the University of Edinburgh, after consultation with the Senatus, to modify from time to time the provisions as to curriculum hereinbefore contained, in case such modification shall be rendered desirable.

X. (1) The degree of Mus. D. may be conferred *honoris causâ tantum*.

(2) The honorary degree of Mus. D. will not be conferred by the Senatus on any person unless recommended by the Faculty of Music in a reasoned representation, submitted in writing to the Senatus, and considered and approved by the Senatus at a special meeting at which not less than two-thirds of the members were present.

#### PRELIMINARY EXAMINATION.

The Examination in English, Latin, Greek, Mathematics, French, German, and Italian, or such other language as the Senatus may approve, is the same as the Preliminary Examination in English, Lower Latin, Lower Greek, Lower Mathematics, French, German, and Italian, or other language approved by the Senatus, for the Degree in Arts; and the Examination in Logic and Elementary Physics is of the same standard as the Preliminary Examination in these subjects for Degrees in Medicine, under the Old Regulations. The subjects are denoted in the Time-Table of the Preliminary Examinations for the Degree in Arts by the figure 4.

Candidates for Examination must apply at the Matriculation Office, University (Old) Buildings, for schedules, which must be completed and returned along with the fees, not later than 18th September 1901 and 1st March 1902 for the autumn and spring Examinations respectively.<sup>1</sup>

Candidates applying for information regarding the Preliminary Examination will be supplied with copies of the Regulations for the Preliminary Examinations for Degrees in Arts and in Medicine, which give the outlines and dates, &c., for the Preliminary Examination for Degrees in Music.

#### FEES.<sup>1</sup>

Preliminary Examination for each appearance, 10s. 6d.

Degree of Mus. B. is £10, 10s., divided as follows :—

<sup>1</sup> If names are not entered, and fees are not paid, on or before the stated dates, a late-entry fee of ten shillings must be paid before the Candidate can be admitted to examination.



First Professional Examination . . . . .	£3	3	0
Second Professional Examination—Literary part . . . . .	1	1	0
Do. Do. —Musical part . . . . .	3	3	0
For the Diploma ( <i>payable at least two days before Graduation</i> ) . . . . .	3	3	0

Candidates who fail pay a fee of 10s. 6d. for each subject in which they are admitted to re-examination.

Candidates may pay the fees personally, or transmit them to T. GILBERT, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts*, crossed Union Bank of Scotland (Hunter Square Branch), Edinburgh, but not by cheques on private accounts.

## DATES OF DEGREE EXAMINATIONS.

1902.

March 10. Names to be given in, Certificates shown, and fees paid, on or before this date.

### FIRST PROFESSIONAL EXAMINATION.

- „ 24. Mon. Singing, Playing, Reading at Sight, and Ear Test, at 11; Harmony, at 2.
- „ 25. Tu. Counterpoint, at 10; Elements of Music, at 2.
- „ 26. Wed. History of Music, at 10; Form, at 2.

### SECOND PROFESSIONAL EXAMINATION.

- „ 24. Mon. Playing at Sight from Scores, at 10; Instrumentation and Critical Knowledge of Scores, at 11; Harmony, at 2.
- „ 25. Tu. Counterpoint, at 10; Canon and Fugue, at 2.
- „ 26. Wed. History, at 10; Form, at 2.
- „ 27. Th. Acoustics and Physiology of the Vocal Organs, at 10; Rhetoric and English Literature, at 2.

### GRADUATES IN MUSIC.

THE DEGREE OF BACHELOR OF MUSIC (MUS.B.).

13th April 1898.

*Matthew Shirlaw.*

14th April 1899.

*Agnes Johnston.*

| *Christina Struthers.*

THE HONORARY DEGREE OF DOCTOR OF MUSIC (MUS.D.).

1895.

Ebenezer Prout, B.A.

1896.

Sir Alexander Campbell Mackenzie.

1899.

Hugo Riemann, Ph.D., Dozent at the University of Leipzig.

Sir Herbert Stanley Oakeley, D.C.L., LL.D.

## BUCHER SCHOLARSHIP.

By the will of Signor Theophile Bucher, his trustees were enjoined to pay over the residue of his estate, amounting to about £4000, to the University, for the purpose of founding one or more Scholarships in Music to be held by any young men born in Scotland, who may shew a natural talent for music and wish to make it their profession, for the purpose of improving their education, and enabling them to prosecute the study of the science and art of Music in Italy, Germany, and France.

The Subjects of Examination for the Scholarship include Harmony, Rhythm, and Counterpoint, and the competition is open to young men between the ages of sixteen and twenty-five inclusively, who have been born in Scotland, and who either are, or have been, enrolled as students in the Faculty of Music in this University. The value shall not, after deducting the expenses of management and of examination, exceed £120 in any one year, the interest in excess of that sum to be added to the capital to form a second Scholarship. It is tenable for three years, and may be extended to a period not exceeding two years, during which time the scholars must prosecute the study of the science and art of Music in Italy, Germany, and France, as the Senatus, on the recommendation of the Faculty of Music, may determine. The Scholarship may be open in 1902. See Scheme of Administration, page 709 of CALENDAR for 1894-95.

1899. *John Petrie Dunn.*

FREDERICK NIECKS, Mus.D.,  
*Dean of the Faculty of Music.*

## JOINT BOARD OF EXAMINERS OF THE SCOTTISH UNIVERSITIES.

A Joint Board of Examiners, which controls and supervises the Preliminary Examinations, is appointed annually by the University Courts of the four Scottish Universities, and holds office from 1st February to 31st January in the succeeding year. The Board sits for a year at each University in rotation, viz. :—Edinburgh, Glasgow, Aberdeen, St Andrews. The Principal of the University at which the Board sits is Chairman for the time, and the Secretary of the University Court is Convener.

Members of the Board, which meets at Edinburgh for the current year (1st February 1901 to 31st January 1902):—

*Chairman*—Principal Sir William Muir, K.C.S.L., D.C.L., &c., &c., University, Edinburgh.

*Convener*—Rev. Professor Taylor, D.D., University, Edinburgh.

*Appointed by Edinburgh University*—Professor Saintsbury, LL.D. (English); Professor Hardie (Classics); James Goodwillie, M.A., B.Sc. (Mathematics and Dynamics); George B. Gardiner, M.A., D.Sc. (Modern Languages).

*Appointed by Glasgow University*—H. Bellyse Baildon, Ph.D. (English); Mr Robert G. Nisbet (Classics); Professor Jack (Mathematics and Dynamics); Charles Martin, M.A. (Modern Languages).

*Appointed by Aberdeen University*—Alexander Mackie, M.A. (English); Professor Harrower (Classics); Professor Pirie, LL.D. (Mathematics and Dynamics); William Robertson, M.A. (Modern Languages).

*Appointed by St Andrews University*—Professor M'Cormick (English); John Mackenzie, M.A. (Classics); George Lawson, M.A. (Mathematics and Dynamics); Mons. Alfred Mercier, L.-ès-L. (Modern Languages).

The Joint Board from time to time issues Supplementary regulations for the Preliminary Examination, and sets the papers, which are common to all the Scottish Universities. It

also gives instructions to the Examiners with a view to secure adequate and uniform examination.

#### PRELIMINARY EXAMINATION IN ARTS AND SCIENCE.

In addition to the Regulations, Section III. to V. inclusively, pages 107-110, the Joint Board have made the following Supplementary Regulations:—

1. ENGLISH will include Grammar, Composition, Literature, History, and Geography.

(a) *Grammar* will include Analysis, Parsing, Derivation, and Correction of sentences.

(b) *Composition* will include an Essay and Paraphrasing.

(c) *Literature* will comprise a knowledge of certain prescribed books of two or three writers. Questions requiring a general knowledge of the life and works of the greater writers will not be set; but one or two questions may be set, giving an opportunity to candidates who have read widely in English Literature to show their knowledge.

The Books prescribed are:—For October 1901—1. Shakespeare, *King Lear*. 2. Scott, *Old Mortality*. 3. Macaulay's two Essays on William Pitt, Earl of Chatham (pub. Macmillan). For April and October 1902—1. Shakespeare, *As You Like It*. 2. Lamb, *First Essays of Elia*. 3. Dickens, *Barnaby Rudge*.

(d) *History* will include a knowledge of one of the three following periods, questions in each of which will be set in each examination, namely:—The Outlines of the History of both England and Scotland; (a) from the Roman occupation to 1603; (b) from 1603 to the Union of the Parliaments in 1707; (c) from the Union of the Parliaments to the Reform Bill of 1832.

(e) *Geography* will include a general knowledge of the Geography of the World, and a special knowledge of the Geography of the British Empire.

2. The LATIN Examination on the Higher Standard will be—Translation, Prose Composition, Grammar, and Sentences.

3. The GREEK Examination on the Higher Standard will be—Translation, Sentences, and Grammar. An easy passage of continuous English prose will be set as an alternative or a substitute for the English Sentences hitherto set.

The passages for Translation both from Greek and Latin will include Prose and Verse.

4. The LATIN Examination on the Lower Standard will be—Translation and Parsing, Prose Composition, Grammar, and Sentences.

5. The GREEK Examination on the Lower Standard will be—Translation, Sentences, and Grammar.

In the Latin and the Greek papers, both on the Higher and Lower Standards, Candidates are required to satisfy the Examiners both in composition and in translation.

Candidates who, having taken in *Latin* or *Greek* the Examination on the Higher Standard have failed to pass on that Standard, but have obtained a percentage of marks equivalent to a pass on the Lower Standard, may be held by the Board to have passed the Examination on the Lower Standard.

6. In the Examination in MATHEMATICS on the Higher and Intermediate, and on the Lower Standards, each question in Geometry will consist of two parts, of which one will be an easy deduction or illustrative exercise on the proposition set as book work.

The papers in Mathematics on the Higher Standard and on the Intermediate Standard will be devoted to the various subjects comprised in them as nearly as possible in the following proportions:—Two-fifths to *Geometry*, two-fifths to *Algebra* (including *Arithmetic*, if thought desirable), and one-fifth to *Trigonometry*.

Candidates for the Higher Standard may obtain full marks by doing correctly about two-thirds of the questions set in each subject; but the Examiners will be entitled to reject a Candidate who makes in any subject less than a certain minimum of the marks allotted to that subject.

The pass mark for Candidates on the Intermediate Standard is fixed with reference to the total number of marks assigned to questions which fall under the syllabus of the Intermediate Standard; but such Candidates will receive credit for any question they may answer.

The paper in MATHEMATICS on the Lower Standard will be devoted to the various subjects comprised, in as nearly as possible the following proportions:—Four-ninths to *Geometry*, three-ninths to *Algebra*, and two-ninths to *Arithmetic*.

Candidates may obtain full marks by doing correctly about two-thirds of the questions set in each subject; but the Examiners will be entitled to reject a candidate who makes in any subject less than a certain minimum of the marks allotted to that subject.

7. The paper on DYNAMICS will be directed to test the Candidate's knowledge of the fundamental principles of the subjects included in it. As far as possible each question will consist of two parts, one of which will be a numerical or other simple illustrative example of the principle with which the other part of the question deals.

About one-seventh of the paper will be devoted to *Kinematics*, and the remainder of the paper will be assigned to *Kinetics*, *Statics*, and *Hydrostatics*, in as nearly as possible equal proportions.

Candidates may obtain full marks by doing correctly about two-thirds of the questions set in each section of the paper.

Dynamics shall include the following:—

(1) KINEMATICS.—Displacements, velocities, and accelerations of a moving point, with their compositions and resolutions. Translations of a rigid body. Relative velocity of two moving points.

(2) KINETICS.—The laws of motion, momentum, force, energy, work, —their measures in the British and C.G.S. systems of units. Change

of units. Rectilinear motion of a particle under the action of constant forces. Free motion of a body under gravity, including projectiles. Atwood's machine. Impulsive forces. Direct impact of smooth spheres.

(3) STATICS.—Composition and resolution of co-planar forces. Theory of co-planar couples. Conditions of equilibrium of forces in one plane. Centre of mass. Friction. Machines. Application of the principle of work to machines.

(4) HYDROSTATICS.—Definitions of *solid, fluid, liquid, gas*. Viscosity. Measure of the pressure at a point of fluid. Law of equable transmission of pressure. Laws of variation of pressure in heavy liquids. Resultant pressure of a heavy liquid on a plane surface, including the centre of pressure of a plane surface. Principle of Archimedes. Experimental determination of the densities of solids, liquids, and gases. Atmospheric pressure. The barometer. Boyle's law. The siphon, pumps for liquids, air pumps, and the diving-bell.

Questions may be set which involve the Trigonometry of right-angled triangles.

#### 8. For the Examination in FRENCH and GERMAN—

Two papers will be set, both in French and German; an hour and a half being allowed for the first paper, and two hours for the second; the first paper will contain a passage for translation from English into French or German, with some short sentences of an idiomatic character; the second paper will contain a set of grammatical questions, two passages for translation into English (one in Verse, one in Prose), and a selection of Literary or Philological questions, from which the Candidate will be allowed to choose *one only*.

The questions on Literature will be confined year by year to certain groups of authors, as in the following scheme:—

*French*.—In October 1901 (*XIXth Century*)—Chateaubriand, Mme. de Staël, Lamartine, Victor Hugo, Alfred de Musset, Alexandre Dumas, George Sand, Balzac, Prosper Mérimée, Guizot, Thiers, Mignet, Michelet. In April and October 1902 (*XVIIIth Century*)—Pascal, Descartes, Corneille, Racine, Molière, Boileau, La Fontaine, Mme. de Sévigné, Bossuet, Fénelon, La Rochefoucauld, La Bruyère.

*German*.—In October 1901.—Jean Paul, the Schlegels, Novalis, Tieck, Arnim, Brentano, Grillparzer, Heine, Uhland. In April and October 1902.—Klopstock, Wieland, Lessing, Herder, Bürger, Voss, Friedrich Leopold Stolberg, Höltz, Leisewitz.

#### EXAMINATIONS EXEMPTING FROM THE PRELIMINARY EXAMINATION IN ARTS AND SCIENCE.

The Joint Board accept the following Examinations as exempting from the Preliminary Examination in Science, either *wholly* or *in part*:—

1. A Degree in Arts or in Science, not being an Honorary Degree, in any of the Universities of the United Kingdom, shall exempt from the Preliminary Examination in Arts or in Science, as the case may be.



2. For the Preliminary Examination in Arts and Science the Higher and Honours Grade Leaving Certificates of the Scotch Education Department in Latin, Greek, and Mathematics will be accepted as equivalent to the Higher Standard in each of these subjects, as prescribed by the Arts Regulations, and the Lower Grade Certificate to the Lower Standard; the Higher and Honours Grade Leaving Certificate in English, in Modern Languages, and in Dynamics will be accepted as equivalent to the standard prescribed for each of these subjects by the Arts Regulations.

3. A Certificate of having passed in the Honours or First Division in English in the London University Matriculation Examination will be accepted as equivalent to English in the Arts and Science Preliminary Examination; and the Joint Board also accepts for the Preliminary Arts and Science Examination (1) London University Matriculation Mathematics as equivalent to Lower Mathematics; (2) London University Matriculation Mechanics as equivalent to Dynamics; and (3) London University Intermediate Mathematics as equivalent to Intermediate and Higher Mathematics.

4. *Oxford University Senior Local Examinations*, if passed with distinction, will be accepted as exempting *pro tanto* in Higher Latin, Higher Greek, French, German, and Intermediate Mathematics; also in English, provided that in English the Candidate has passed with distinction in division 1,<sup>1</sup> and in division 3, or 4, or 5<sup>1</sup>; a pass without distinction, will be accepted *pro tanto* for Lower Latin and Lower Greek, and Lower Mathematics.

5. *Oxford University Higher Examination for Women* will be accepted as exempting *pro tanto* for the Arts and Science in the case of Higher Latin, Higher Greek, English, and Lower Mathematics; and if with distinction, for French and German and Higher Mathematics.

6. *Cambridge University Local Examinations* :—

(a) *Junior Locals*. The pass with distinction will be accepted for Lower Mathematics, provided the Candidate has passed in Books I., II., and III. of Euclid, and in Quadratic Equations.

(b) *Senior Locals*. The pass will be accepted as exempting *pro tanto* for Lower Latin, and Lower Greek, and for Higher Mathematics; and if with distinction, for English, Higher Latin, Higher Greek, and Modern Languages.

7. *Cambridge University Higher Local Examinations* will be accepted *pro tanto*.

8. *Oxford and Cambridge Schools Examination Board*.

The Lower Certificate will be accepted for Lower Mathematics, pro-

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<sup>1</sup> Division 1. Grammar and Analysis; 2. Ancient History; <sup>1</sup>/<sub>3</sub>. English History; 4. Shakespeare and Scott; 5. Physical, Political and Commercial Geography.

vided the candidate has passed in three books of Euclid, and as far as Quadratic Equations in Algebra.

*Higher Certificate.* The pass will be accepted for Lower Latin, Lower Greek, and Lower Mathematics, provided the latter includes Elementary and additional Mathematics; if with distinction, will be accepted for Higher Latin, Higher Greek, French, German, and Higher Mathematics.

9. *Victoria University.* The Preliminary Examination will be held as exempting from the Preliminary proper, but not from the Examination required for admission to a graduating class in any language. (See Section iv., Sub-sections (2) (3) of Regulations, pages 108, 109.)

### PRELIMINARY EXAMINATION FOR DEGREES IN MEDICINE.<sup>1</sup>

REGULATIONS FOR THE PRELIMINARY EXAMINATION FOR DEGREES  
IN MEDICINE AND SURGERY, SUPPLEMENTARY TO SECTIONS  
III.-VI. INCLUSIVELY, PAGES 372 AND 373 HEREOF, ABRIDGED  
FROM THE REGULATIONS OF THE JOINT BOARD.

The papers set in Latin, Greek, and Mathematics are the same as those set on the Lower Standard in these subjects in the Arts and Science Preliminary Examination.

These are defined in the Regulations relating to the Arts and Science Preliminary, as follows:—

The *Latin*<sup>2</sup> Examination on the Lower Standard will be—Translation and Parsing, Prose Composition, Grammar, and Sentences.

The *Greek*<sup>2</sup> Examination on the Lower Standard will be—Translation, Sentences, and Grammar.

In the Latin and Greek papers, candidates are required to satisfy the Examiners both in composition and in translation.

*Mathematics* on the Lower Standard will comprise:—

- (1) Arithmetic, including Vulgar and Decimal Fractions, Proportion, Percentage, Square Root, Simple Interest.
- (2) Algebra, including Fractions, Factors, Square Root, Equations of the First Degree, Simultaneous Equations of the First Degree, Easy Quadratic Equations, Problems leading to the above Equations.
- (3) Geometry—Euclid, Books I., II., and III. (or their equivalents), with Easy Deductions. Demonstrations other than Euclid's will be accepted if they assume no propositions which in Euclid's order are subsequent to the proposition under consideration.

<sup>1</sup> See Examinations accepted as exempting, page 453.

<sup>2</sup> No Books prescribed.

The paper in Mathematics will be devoted to the various subjects comprised in as nearly as possible the following proportions: four-ninths to *Geometry*, three-ninths to *Algebra*, and two-ninths to *Arithmetic*.

Candidates may obtain full marks by doing correctly about two-thirds of the questions set in each subject; but the Examiners will be entitled to reject a Candidate who makes in any subject less than a certain minimum of the marks allotted to that subject.

In *English* no set books are prescribed, nor is a general knowledge of the life and works of the greater authors expected of Candidates, but one or two questions may be set, giving an opportunity to Candidates to show a knowledge of famous literary works. The historical questions will not be confined to any one period, but will cover the whole of British History, and will be set in such a way as to give an opportunity to Candidates who have confined their studies to a single period to show their knowledge. A single three hours' paper will be set, containing an Essay, a Paraphrase, two questions on History, two on Geography, four on Grammar (including Correction of Sentences, Parsing, Analysis of Sentences, and Derivations), two of a literary and general kind. Eight answers will be required. The Essay, the Paraphrase, one answer on History, and one on Geography will be compulsory.

*French and German.*<sup>1</sup>—One paper will be set in French and one in German. The papers will be of a Lower Standard than those set in these subjects in the Arts and Science Preliminary. The time allowed for each of these papers will be three hours. The paper in each subject will comprise questions in Grammar, translation into English, a piece of English, and some short sentences in English of an idiomatic character for translation.

It shall be in the option of any Candidate for the Medical Preliminary to take the papers set on the Higher Standard for the Arts Preliminary in any of the subjects. (See Arts Regulations.)

Candidates who, having taken *English, Latin, Greek, Mathematics, or a Modern Language*, on the Higher Standard, as prescribed by the Regulations for the Arts and Science Preliminary, have obtained a satisfactory percentage of marks, will be held to have passed the Medical Preliminary in these subjects, provided that all the required subjects are passed at not more than two Examinations.

#### EXAMINATIONS ACCEPTED AS EXEMPTING FROM THE PRELIMINARY EXAMINATION IN MEDICINE.

*Provided always that the Regulations of the General Medical Council regarding the Registration of Students of Medicine be complied with.*

I. In terms of the Regulations for Degrees in Medicine and Surgery, "a Degree in Arts or in Science (not being a Degree *honoris causa*

<sup>1</sup> No Books prescribed.

*tantum*) in any of the Universities of the United Kingdom, or in any Colonial or Foreign University, specially recognised for the purpose by the University Court, will exempt from the Preliminary Examination."

In virtue of the powers conferred on them by the Medical Regulations, Section VI., page 373, the Joint-Board have resolved as follows :—

2. Any Candidate who produces a Certificate of having passed the Preliminary Examination in Arts or Science in any Scottish University, either at the University Examination or through the Leaving Certificates of the Scotch Education Department, or partly at the University Examination, and partly through the Leaving Certificates, will be held to have passed the Preliminary Examination for Medicine, provided that the Examination has included the specified subjects of General Education as required under the Regulations of the General Medical Council, and by the Regulations for Graduation in Medicine and Surgery (Sections III.-VI. inclusive).

3. A Candidate who has passed the Arts and Science Preliminary Examination of the Joint Board in any subject (Higher Grade where there is more than one) recognised for the Medical Preliminary Examination, shall be exempted from further examination in that subject in the aforesaid Preliminary Examination.

4. A Candidate who has obtained the Leaving Certificate (Honours or Higher Grade) of the Scotch Education Department in any subject recognised for the Medical Preliminary Examination, shall be exempted from further examination in that subject in the aforesaid Preliminary Examination.

The Regulation that all the subjects of the Examination shall be passed at one or not more than two Examinations shall not be held to apply to the above cases, 2, 3, and 4. But Candidates complying with these Rules (2, 3, and 4) must obtain a University Certificate specifying the Examinations passed by them which have been accepted as equivalents to the Preliminary, and must present said Certificate to the Medical Registrar in order to registration.

Further, each such Candidate when applying for said Certificate must, if he has not entered for any part of the Preliminary, produce a Matriculation Card from some one of the Scottish Universities.

5. Lower Grade Leaving Certificates of the Scotch Education Department will only be accepted as exempting from the Medical Preliminary Examination, provided the examinations in all the requisite subjects have been passed at one or not more than two Examinations.<sup>1</sup>

6. The following English and Irish University Examinations will be accepted (provided they include all the subjects required under the Regulations for Graduation in Medicine and Surgery, and the Regulations of the General Medical Council. See Sections III.-VI. inclusively, pages 372 and 373, viz. :—

<sup>1</sup> For purposes of Registration the General Medical Council require that all the requisite subjects be passed at one Examination.

*Oxford.* Responsions, or Moderations—Provided the Candidate pass the Examination of the Joint Board in English.

Senior Local Examinations will be accepted *pro tanto*, provided that, as regards English, the Certificates shall bear that the Candidate has passed in Division 1<sup>1</sup> of the subject, and in either Division 3, 4, or 5.<sup>1</sup>

Higher Examination for Women will be accepted *pro tanto*.

*Cambridge.* Previous Examination—Provided that Candidates who have passed it prior to Michaelmas 1896 shall pass the Examination of the Joint Board in English. If passed after Michaelmas 1896, the Previous Examination will be accepted as exempting *in toto*.

Senior Local Examinations will be accepted *pro tanto*.

Higher Local Examinations will be accepted *pro tanto*.

*Oxford and Cambridge Schools Examination.* Higher Certificate will be accepted *pro tanto*, provided that, as regards Mathematics, the Certificate shall bear that the Candidate has passed in both Elementary and Additional Mathematics.

*London University.* Matriculation Examination.

*Dublin, Trinity College.* Public Entrance Examination.

*Royal University of Ireland.* Matriculation Examination.

*Victoria University.* Preliminary Examination ; Entrance Examination in Arts.

By *pro tanto* is here meant that a certificate of having passed in the Examination referred to, in any subject required for the Medical Preliminary Examination, shall, as regards that subject, exempt from further Examination in the said Preliminary Examination, provided that all the required subjects shall be passed at one or not more than two Examinations.

7. The Examinations of the following Indian, Colonial, and Foreign Universities and Colleges, will be accepted (provided the Examinations include all the subjects required by the General Medical Council, and prescribed by the Regulations for Graduation in Medicine and Surgery). See Sections III.-VI. inclusively, pages 372 and 373, viz. :—

*Universities of* (1) *Calcutta*, (2) *Madras*, (3) *Bombay*, (4) *Allahabad*, and (5) *Panjab*.—Entrance Examination.<sup>2</sup>

*Universities of* (1) *Cape of Good Hope*.—Matriculation Examination ; (2) *Tasmania*.—Matriculation Examination ; (3) *New Zealand*.—Matriculation and Medical Preliminary Examinations ; (4) *Melbourne*.—Matriculation Examination ; (5) *Sydney*.—Matriculation

<sup>1</sup> See footnote, page 451.

<sup>2</sup> For purposes of Registration the General Medical Council require, in the case of Calcutta and Madras, the "First Examination in Arts" ; in the case of Bombay, the "Matriculation Examination" ; and in the case of Allahabad and Panjab, the "Intermediate Examination in Arts."



Examination ; (6) *Adelaide*—Matriculation Examination, or its substitute, the Senior or Junior Public Examination.

*The Provincial Education Department of Ontario*.—Departmental Pass Arts Matriculation Examination.

*Trinity University, Toronto*.—Matriculation Examination

*The University of Toronto*.—Senior or Junior Matriculation Examination.

*Queen's College and University, Kingston*.—Matriculation Examination.

*M<sup>c</sup>Gill University*.—Matriculation Examination.

*King's College, Windsor, Nova Scotia*.—Responsions.<sup>1</sup>

*Dalhousie College, Halifax*.—Matriculation Examination.

*Mount Allison College, Sackville, New Brunswick*.—Matriculation Examination.

*The University of Winnipeg*.—Preliminary Examination in Arts.

*Victoria College, Upper Canada*.—Matriculation Examination.

*The University of Halifax, Nova Scotia*.—Matriculation Examination.

*The University of Fredericton, New Brunswick*.—Matriculation Examination.

*The Western University of Ontario*.—Matriculation Examination.

*University of Manitoba*.—Previous Examination.

*Codrington College (Barbados)*.—English Certificate for Students of two years' standing, and Latin Certificate, or "Testamur."

*Germany and other Continental Countries*.—Gymnasial Abiturienten-Examen, and corresponding Entrance Examination to the Universities.

8. In the case of Candidates for the Medical Preliminary Examination, who hold qualifications from Foreign or Colonial Bodies, other than Universities, whose certificates are not included in the list of Equivalent Examinations issued by the Joint Board, a Committee in each University, consisting of the Deans of the Faculties of Arts, Science, and Medicine, is empowered to accept such certificates, if it deems them sufficient, provided that all such cases are reported to the Joint Board at their next meeting.

<sup>1</sup> Here the General Medical Council requires the "Preliminary Examination" of the Provincial Medical Board of Nova Scotia.



## Class Prize and Honours Lists.

### FACULTY OF ARTS.

#### SUMMER SESSION, 1900.

##### LATIN.

###### HONOURS CLASS—HONOURS GRADUATION HALF-COURSE.

FIRST-CLASS CERTIFICATES OF MERIT.—1. John M. B. Duncan, Edinburgh (*Medal*); 2. Edward Burns Ross, Edinburgh.

SECOND-CLASS CERTIFICATES OF MERIT.—3. Donald H. Wares, Wick; 4. John M. Sutherland, Edinburgh; 5. George Robertson, Edinburgh; 6. Catherine A. Nicolson, Edinburgh.

PROSE COMPOSITION.—1. J. M. B. Duncan; 2. D. H. Wares and G. Robertson—equal.

###### SENIOR CLASS.

FIRST-CLASS CERTIFICATES OF MERIT.—1. George W. Jones, Dundee (*Medal*); 2. Robert Aitken, Hawick; 3. Samuel S. Anderson, Edinburgh; 4. George M. Wood, Cullen.

SECOND-CLASS CERTIFICATES OF MERIT.—5. George A. Carse, Edinburgh; 6. Gulielma F. S. Peterson, Edinburgh; 7. James W. M. Williamson, Kirn; 8. E. Maude M. Alexander, Selkirk; 9. John Anderson, Edinburgh.

PROSE COMPOSITION.—1. G. W. Jones; 2. S. S. Anderson; 3. R. Aitken and J. Anderson—equal.

ROMAN HISTORY.—1. R. Aitken; 2. G. W. Jones.

###### JUNIOR CLASS—PRELIMINARY COURSE.

FIRST-CLASS CERTIFICATES OF MERIT. — 1. Elizabeth A. Fraser, Musselburgh; 2. Mary Fullarton, Wick; 3. Adam Blyth Webster, Christchurch, New Zealand.

SECOND-CLASS CERTIFICATES OF MERIT.—4. Turnbull C. Hutton, Inverkeithing.

PROSE COMPOSITION.—1. A. B. Webster; 2. E. A. Fraser and M. Fullarton—equal.

JAMES MILL, M.A., *Lecturer.*

##### GREEK.

###### HONOURS CLASS.

FIRST-CLASS CERTIFICATES OF MERIT.—1. J. M. B. Duncan, Edinburgh (*Medal*); 2. G. T. Ford, Portobello; Charles Goodall, Edinburgh; and J. J. Macpherson, Kingussie—equal; 5. E. B. Ross, Edinburgh, and J. M. Sutherland, Edinburgh—equal.

SECOND-CLASS CERTIFICATES OF MERIT.—7. A. M. Shaw, Inverness ; 8. D. H. Wares, Wick ; 9. S. Waterston, Edinburgh ; 10. Miss C. A. Nicolson, Edinburgh, and D. M. Maclean, Plockton—equal.

COMPOSITION.—C. Goodall, Edinburgh.

ENGLISH ESSAY.—G. W. Chrystal, Edinburgh.

#### SENIOR CLASS.

FIRST-CLASS CERTIFICATES OF MERIT.—1. James Waterston, Edinburgh ; 2. M. M. Wood, Cullen ; 3. J. H. Maclagan Wedderburn, Forfar.

SECOND-CLASS CERTIFICATES OF MERIT.—4. C. L. Philip, New Galloway ; 5. J. W. M. Williamson, Kirn ; 6. R. B. Thomson, Edinburgh.

#### JUNIOR CLASS.

SECOND-CLASS CERTIFICATES OF MERIT.—1. John Anderson, Edinburgh ; 2. Miss E. Maude Alexander, Selkirk, and Miss G. A. S. Peterson, Edinburgh—equal.

A. W. MAIR, M.A., *Lecturer.*

### ENGLISH LITERATURE.

#### HONOURS' CLASS.

FIRST-CLASS CERTIFICATES.—1. George A. Waters, Thurso (*Medal*) ; 2. Marie Selima Joachimi, Nordhausen (Harz), Germany.

SECOND-CLASS CERTIFICATES.—3. Janet Straton M'Ewen, Stonehaven.

G. GREGORY SMITH, M.A., *Lecturer.*

### ELEMENTARY HEBREW.

FIRST-CLASS CERTIFICATES.—1. James A. Fleming, M.A., Dalkeith (*Medal*) ; 2. Adam Mackay, M.A., Forfar ; 3. George L. Brander, M.A., Edinburgh.

SECOND-CLASS CERTIFICATE.—4. J. B. Jamieson, M.A., Portobello.

ANDREW TWEEDIE, B.D.,  
*University Assistant in Semitic Languages.*

### MATHEMATICS.

#### HONOURS.

FIRST-CLASS CERTIFICATE.—F. Ross, Coupar-Angus.

SECOND-CLASS CERTIFICATES.—A. H. Armstrong, Belfast ; G. S. Duncan, Leith ; H. G. R. Leonard, India.

#### HIGHER SENIOR.

FIRST-CLASS CERTIFICATE.—W. H. Allan, Edinburgh.

SECOND-CLASS CERTIFICATES.—W. A. K. Christie, Edinburgh ;

D. K. Cunnison, Edinburgh ; J. E. Dean, Bradford ; P. B. M. Macaulay, Irvine.

LOWER SENIOR.

FIRST-CLASS CERTIFICATES.—1. J. Black, East Calder (*Medal*) ; 2. J. Handyside, Leith ; 3. W. Farquharson, Edinburgh.

SECOND-CLASS CERTIFICATES.—J. H. Aikman, Leith ; A. T. Cameron, London ; J. L. Geddie, Edinburgh ; J. E. Newlands, Edinburgh ; G. Robertson, Edinburgh ; R. Younger, Edinburgh.  
CHAS. TWEEDIE, M.A., B.Sc., *Lecturer*.

ELEMENTARY DYNAMICS.

FIRST-CLASS CERTIFICATE.—1. Frank Ross, Scotland.

SECOND-CLASS CERTIFICATES.—2. May O. Swanston, Scotland ; 3. Una Mackinnon, Scotland, and J. MacLagan, Scotland—equal.

C. G. KNOTT, D.Sc., *Lecturer*.

ADVANCED EXPERIMENTAL PHYSICS.

FIRST-CLASS CERTIFICATE.—Land Prize.—Miss J. M. Maqueen.

ADVANCED NATURAL PHILOSOPHY (Tutorial).

FIRST-CLASS CERTIFICATES.—Land Prizes.—1. G. Philip ; 2. Miss A. B. Lennie.

W. PEDDIE, D.Sc., *Lecturer*.

BRITISH HISTORY (General and Constitutional)—1066-1832.

FIRST-CLASS CERTIFICATES.—1. W. D. R. Prentice, M.A., Portobello (*Medallists*) ; 2. David G. Mitchell, Edinburgh (*Prizemen*) ; 3. Ernest Shearer, Orkney.

SECOND-CLASS CERTIFICATES.—4. Charles Lyall Philip, New Gallo-way ; 5. Robert D. Bell, M.A., Edinburgh ; 6. William H. Nelson, Rosewell.

D. P. HEATLEY, *University Assistant in History*.

POLITICAL SCIENCE.

FIRST-CLASS CERTIFICATES.—1. Donald Banks, M.A., Wigtownshire (*Medallist*) ; 2. W. D. R. Prentice, M.A., Portobello (*Prizemen*) ; 3. Thomas Fraser Scott, M.A., Cromarty ; 4. Charles F. Grant, M.A., Dundee.

SECOND-CLASS CERTIFICATES.—5. W. B. Brander, Edinburgh ; 6. Ernest Shearer, Orkney ; 7. Herbert Marsh, Edinburgh ; 8. J. S. Allison, M.A., Edinburgh ; 9. J. G. Sutherland, Wick ; 10. Motoichi Mizusaki, Japan.

D. P. HEATLEY, *University Assistant in History*.

WINTER SESSION, 1900-1901.

LATIN.

HONOURS CLASS.

FIRST-CLASS CERTIFICATES OF MERIT.—1. F. H. T. Gray, Elgin (*Medal*); 2. James Anderson, Forres; 3. Norman J. Henderson, Edinburgh; 4. Alexander Duthie, Boston, Mass. (*Prizes*); 5. Charles Goodall, Edinburgh; 6. William Pryde, Edinburgh; 7. John M. Sutherland, Edinburgh.

SECOND-CLASS CERTIFICATES OF MERIT.—8. George Robertson, Edinburgh; 9. G. F. Dingemans, Zutphen; 10. M. S. Ketchin, Roslin; 11. Catherine A. Nicolson, Edinburgh; 12. J. M. B. Duncan, Edinburgh; 13. R. M. Maciver, Stornoway.

PROSE COMPOSITION.—1. F. H. T. Gray (*Prize*); 2. James Anderson and Charles Goodall—equal; 4. G. F. Dingemans.

VERSE COMPOSITION.—John M. Sutherland.

HISTORY OF LITERATURE.—1. F. H. T. Gray (*Prize*); 2. A. Duthie.

LATIN ESSAY.—Norman J. Henderson.

ENGLISH ESSAY.—James Anderson and N. J. Henderson—equal.

SENIOR CLASS.

FIRST-CLASS CERTIFICATES OF MERIT.—1. Alexander F. Giles, Edinburgh; 2. A. D. A. MacGregor, Edinburgh; 3. Alexander Robertson, Edinburgh; 4. John Jackson, Ayr (*Medals*); 5. Thomas B. Johnston, Edinburgh; 6. Maida Lenwood, Sheffield, and Gilbert Watson, Edinburgh—equal; 8. George L. Turnbull, Edinburgh; 9. Lennox F. Robertson, Edinburgh; 10. Charles B. S. Monfries, London, and Frederick M. Philip, New Galloway—equal; 12. James M'Caig, Thornhill (*Prizes*); 13. John C. H. Macnair, Edinburgh, and George W. Scarth, Kirkwall—equal; 15. Alice A. Simpson, Bathgate; 16. A. L. G. Walker, Edinburgh; 17. Annie R. Murray, Ayr; 18. Mary J. Alison, Monifieth; 19. Jane Crow, Montrose; Ernest H. Lamb, Longtown; and John F. Robertson, Edinburgh—equal; 22. Samuel Hunter, Edinburgh.

SECOND-CLASS CERTIFICATES OF MERIT.—23. John C. M'Kenzie, Leith; 24. Hermina J. Henderson, Leghorn, Italy; 25. Jeannie B. Thomson, Perth, and Alexander H. Gardner, Edinburgh—equal; 27. W. C. O. Barrie, Edinburgh; 28. James Munro, Edinburgh; 29. Robert T. Monteith, Abernethy, Perthshire; 30. John Morrison, Edinburgh; 31. Marion H. Archibald, Hamilton; 32. Hubert W. Strathairn, Crieff; 33. David H. Ash, Perth; 34. Jeanie B. Smith, Edinburgh, and Alexander J. Merriles, Edinburgh—equal; 36. Thomas T. Alexander, Penicuik, and George F. Barbour, Pitlochry—equal; 38. J. W. W. Davidson, Edinburgh; 39. Jessie B. T. Weir, Fauldhouse; 40. Joanna E. Levack, Tobermory; 41. Stewart Home, Edinburgh, and Alexander

Mackay, Bettyhill—equal ; 43. Benjamin B. Bruce, Thurso, and J. W. M. Williamson, Kirn—equal ; 45. James Forgie, Ayr ; 46. Annie S. Gow, Cupar-Angus ; 47. Hairstens M'Gowan, Girvan ; 48. John Kellie, Kilmarnock ; 49. Ernest T. Steele, Kendal.

LATIN PROSE COMPOSITION.—1. A. F. Giles ; 2. J. C. H. Macnair ; 3. S. Home (*Prizes*) ; 4. Jane Crow and J. Jackson—equal ; 6. A. D. A. MacGregor ; 7. G. Watson ; 8. F. Eva L. Campbell-Colquhoun, Crieff ; 9. W. C. O. Barrie ; 10. G. F. Barbour.

LATIN VERSE COMPOSITION.—C. B. S. Monfries.

HISTORY AND LITERATURE.—1. A. F. Giles (*Prize*) ; 2. C. B. S. Monfries ; 3. T. B. Johnston ; 4. Alexander Robertson.

#### JUNIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. A. Blyth Webster, Christchurch, New Zealand (*Medal*) ; 2. Philip W. Lilley, Arbroath ; 3. Henry Ireland, Forfar ; 4. George Young, Edinburgh.

SECOND-CLASS CERTIFICATES OF MERIT.—5. Jessie Young, Edinburgh ; 6. Robert Lawton, Innerleithen ; 7. Violet W. Flashman, Dunoon ; 8. John M. Bain, Hawick ; 9. Thomas Mitchell, Blairgowrie ; 10. Jeanie G. Geddes, Wick.

LATIN PROSE COMPOSITION.—1. P. W. Lilley (*Prize*) ; 2. A. B. Webster ; 3. Jessie Young ; 4. George Young.

HISTORY AND LITERATURE.—1. A. B. Webster (*Prize*) ; 2. P. W. Lilley.

W. R. HARDIE, M.A., *Professor*.

#### GREEK.

##### HONOURS CLASS.

FIRST-CLASS CERTIFICATES OF MERIT.—1. J. M. B. Duncan, Edinburgh (*Medal and Scot and Dunbar Prize*) ; 2. James Anderson, Forres, and W. Pryde, Edinburgh—equal ; 4. G. W. Chrystal, Edinburgh, and Charles Goodall, Edinburgh—equal (*Prizes*) ; 6. A. Duthie, Montrose, and J. J. Macpherson, Kingussie—equal.

SECOND-CLASS CERTIFICATES OF MERIT.—8. G. F. Dingemans, Zutphen ; 9. George Robertson, Edinburgh ; 10. J. M. Sutherland, Edinburgh ; 11. M. E. Edgar, Edinburgh ; 12. Lilian S. Ross, Edinburgh ; 13. C. A. Nicolson, Edinburgh ; 14. G. Wedderspoon, Inverness ; 15. J. L. Maccallum, Cumberland ; 16. Charles M'Pherson, Laggan.

ENTITLED TO FIRST-CLASS CERTIFICATE, BUT NOT COMPETING.—F. H. T. Gray, Edinburgh.

COMPOSITION PRIZE.—James Anderson, Forres, and J. M. B. Duncan, Edinburgh—equal.

ENTITLED TO COMPOSITION PRIZES, BUT NOT COMPETING.—F. H. T. Gray, Edinburgh, and W. Pryde, Edinburgh.

# SENIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. A. F. Giles, Edinburgh (*Medal*); 2. John Jackson, Ayr; 3. J. C. Mackenzie, Leith; 4. J. C. H. Macnair, Edinburgh; 5. Lennox F. Robertson, Edinburgh; 6. A. D. A. Macgregor, Edinburgh; 7. Maida Lenwood, Sheffield; 8. G. L. Turnbull, Edinburgh; 9. F. M. Philip, New Galloway; 10. Alexander Robertson, Edinburgh; 11. C. B. S. Monfries, London; 12. W. C. O. Barrie, Edinburgh; 13. T. B. Johnston, Edinburgh; 14. R. T. Monteith, Perthshire.

SECOND-CLASS CERTIFICATES OF MERIT.—15. E. H. Lamb, Cumberland; 16. M. MacLagan Wedderburn, Crieff; 17. A. L. G. Walker, Edinburgh; 18. G. Watson, Edinburgh; 19. J. M'Caig, Dumfries; 20. J. W. M. Williamson, Argyleshire; 21. Beatrice S. B. M'Murtrie, Edinburgh; 22. D. L. Cattanach, Edinburgh; 23. J. W. S. Davidson, Edinburgh; 24. W. P. Ferguson, Edinburgh; 25. James Munro, Edinburgh; 26. James Fergie, Ayr; 27. Samuel Hunter, Edinburgh; 28. W. R. Cunningham, Leith; 29. T. T. Alexander, Penicuik.

COMPOSITION PRIZE.—1. A. F. Giles, Edinburgh.

HONOURABLE MENTION.—2. J. C. H. Macnair, Edinburgh.

HISTORY PRIZE.—1. Alexander Robertson, Edinburgh.

HONOURABLE MENTION.—2. C. B. S. Monfries, London.

A. W. MAIR, M.A. (Aberd.), B.A. (Cantab.), *pro Professor*.

# JUNIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. P. Lilley, Arbroath (*Medal*); 2. Evan Evans, Wales.

SECOND-CLASS CERTIFICATES.—3. James Scott, Leith; 4. George Young, Edinburgh, and T. Crockett, Edinburgh—equal; 6. D. Christy, Leith.

PRIZE FOR HISTORY AND LITERATURE.—P. Lilley.

G. B. GARDINER, M.A., D.Sc., *pro Professor*.

# RHETORIC AND ENGLISH LITERATURE.

## HONOURS CLASS (FULL COURSE).

PRIZE AND FIRST-CLASS CERTIFICATE.—1. George A. Waters, Thurso (*Medallist*).

FIRST-CLASS CERTIFICATE.—2. Jean H. Macnair, Isle of Man.

SECOND-CLASS CERTIFICATES.—3. Alex. C. Murphy, Scotland; 4. Peter M. Curle, Edinburgh; 5. Charles Robertson, Perthshire.

## ORDINARY CLASS.

CLASS PRIZES AND FIRST-CLASS CERTIFICATES.—1. George W. Chrystal, Scotland; 2. Jane Ness Lawson, Belfast (*Medallists*); 3. James Reid, Scotland; 4. Alexander Gray, Dundee; 5. Margaret W. Cameron, Arbroath, and Janet Straton M'Ewen,



Scotland—equal; 7. James P. Lowson, Belfast; 8. Margaret J. Thompson, Scotland; 9. William R. Durham, Thurso; 10. Charles L. Riach, Calcutta; 11. Robert D. Bell, Edinburgh; 12. James Jackson, Glasgow; 13. D. L. Cattanach, Scotland.

SECOND-CLASS CERTIFICATES.—14. Hubert Simpson, Scotland; 15. J. Liddell Geddie, Scotland, and Helen M'Lachlan, Scotland—equal; 17. Catherine R. Cameron, Linlithgow; 18. William Landells, Scotland; 19. George G. Campbell, Inverness; 20. Margaret J. Ewan, Broughty Ferry; 21. Agnes Robertson, Scotland; 22. Jessie Elder, Edinburgh; 23. Alexander Buchan, Newburgh; 24. Annie J. Grant, Sutherland; 25. George Kitchen, Scotland; 26. A. A. Fraser, Scotland, and Charles M'Neil, Scotland—equal; 28. Francis G. Scott, Scotland; 29. David Clouston, Orkney; 30. John Donald Bain, Scotland; May O. Swanston, Scotland; and Janet R. Thomson, Whitburn—equal; 33. Elizabeth Smith, Scotland; 34. Andrew Shaw Ogilvie, Scotland; 35. Mary Seaton Robertson, Scotland; 36. John R. M. Forbes, Edinburgh.

ESSAY PRIZES AND FIRST-CLASS CERTIFICATES.—1. George W. Chrystal, Scotland; 2. Robert D. Bell, Edinburgh (*Medallists*); 3. D. L. Cattanach, Scotland; 4. Charles L. Riach, Calcutta; 5. Hubert Simpson, Scotland; 6. George G. Campbell, Inverness; 7. Neil Ross, Scotland; 8. Janet Straton M'Ewan, Scotland, and Francis G. Scott, Scotland—equal; 10. William R. Durham, Thurso.

SECOND-CLASS CERTIFICATES.—11. James Reid, Scotland; James P. Lowson, Belfast; William Landells, Scotland; and Elizabeth S. Goodfellow, Scotland—equal; 15. Andrew S. Ogilvie, Scotland; 16. Jane N. Lowson, Belfast; 17. Margaret W. Cameron, Arbroath; 18. Charles M'Neil, Scotland; 19. Helen M'Lachlan, Scotland; 20. George Kitchen, Scotland, and Robert B. Mackinnon, Glasgow—equal; 22. James Jackson, Glasgow, and Margaret J. Thompson, Scotland—equal; 24. James S. Mackay, Arbroath.

PRIZE FOR VERSE.—George W. Chrystal, Scotland.

HONOURABLE MENTION.—Charles L. Philip, Scotland; Neil Ross, Scotland; Hubert Simpson, Scotland; and Francis G. Scott, Scotland.

SCOTTISH TEXT SOCIETY'S PRIZE.—Jane N. Lowson, Belfast.

*Prox. Acc.*—William Landells, Scotland.

GEORGE SAINTSBURY, M.A., *Professor.*

## OLD AND MIDDLE ENGLISH.

### HONOURS COURSE.

FIRST-CLASS CERTIFICATES.—1. George A. Waters, Thurso (*Medal and Scottish Text Society's Prize*); 2. Jean Hill Macnair, Isle of

464 *Faculty of Arts—Class Prize and Honours Lists.*

Man, and Peter M. Curle, Edinburgh—equal (*Early English Text Society's Prize*).

SECOND-CLASS CERTIFICATES.—4. Charles F. Allan, Edinburgh; John Inch Low, Blairgowrie, re-attended the Second Half-Course, and obtained a First-Class Certificate.

G. GREGORY SMITH, M.A., *Lecturer*.

FRENCH.

HONOURS CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES. — 1. Janie Middleton (*Medallist*); 2. Mary E. M. Clark.

FIRST-CLASS CERTIFICATES.—3. Margaret C. Spears; 4. Margaret D. Black; 5. T. P. Young.

SECOND-CLASS CERTIFICATES.—6. Hugh M. Miller; 7. D. H. Low.

ORDINARY CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. Wilhelmina G. Jameson (*Medallist*); 2. B. H. Watt; 3. John Liddell Geddie; 4. Hannah H. Chalmers (*Special Prize*).

FIRST-CLASS CERTIFICATES.—5. Joanna E. Levack; 6. Mary S. Govan; 7. J. William Ewart Gladstone; 8. Carlotta S. M. Meister, and Helen M'Lachlan—equal; 10. Minnie Moore; 11. Mary C. Jolly; Margaret S. Sibbald, and Margaret A. M. Maclean—equal; 14. Marion T. Moffat; 15. J. H. Aikman.

SECOND-CLASS CERTIFICATES.—16. Kath. J. S. M'Kenzie; 17. Marion H. Smith; 18. J. B. Marshall; 19. Harriet Cowe; 20. W. Allan; 21. Isobel M. Nelson; 22. Beatrice S. Mason; 23. Cathie F. Lee; 24. Logie F. Robertson; John Gass, and Euphemia R. Tasker—equal; 27. J. G. Glen; 28. Jas. Watson.

CHAS. SAROLEA, Ph.D., D.Litt., *Lecturer*.

GERMAN.

HONOURS CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. Jane Middleton, Scotland (*Medal and Edinburgh Goethe Society Prize*); 2. Mary E. M. Clark, Scotland, and Margaret T. Spears, Scotland—equal; 4. Mary D. Black, East Calder.

FIRST-CLASS CERTIFICATE.—Netty J. Donald, Kirkwall.

ORDINARY CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. Wilhelmina G. Jameson, Scotland (*Medal and Edinburgh Goethe Society Prize*); 2. Minnie Moore, Scotland, and S. Stephen Anderson, Scotland—equal.

FIRST-CLASS CERTIFICATES.—4. E. Maude M. Alexander, Selkirk, and Beatrice S. Mason, Scotland—equal; 6. A. O. Anderson,

Scotland; Maggie B. Robertson, Scotland; and Mary S. Govan, Scotland—equal; 9. Marion H. Archibald, Scotland; 10. Mary A. M. Maclean, Scotland; 11. Isab. M'Ewan Towers, Canada.  
SECOND-CLASS CERTIFICATES.—12. Agnes R. Cameron, Edinburgh, and Marion T. Moffat, Irvine—equal; 14. Kath. J. S. Mackenzie, Scotland; 15. K. Edward, Scotland.

OTTO SCHLAPP, Ph.D., *Lecturer.*

### SANSKRIT.

#### SENIOR CLASS.

CLASS MEDAL AND FIRST-CLASS CERTIFICATE OF MERIT.—Shankar Nath. Jhang, Punjab, India.

J. EGDELING, Ph.D., *Professor.*

### CELTIC LANGUAGES AND LITERATURE.

#### CELTIC CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. Alexander Mackay, Farr (*Medallist*); 2. Alexander Sutherland, Brora.

#### ADVANCED CELTIC CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—Alan O. Anderson, Edinburgh (*Medallist*); Alexander Mackay, Farr.

#### GAELIC CLASS.

PRIZE.—Robert T. Monteith, Abernethy, Perth.

PRIZE FOR ESSAY WRITTEN IN GAELIC.—A. O. Anderson, Edinburgh.

SPECIAL PRIZES.—£10, 10s. given by the Highland Society of London—Alexander Mackay, Farr. Book Prizes, given by John Mackay, Esq., Hereford—Alexander Mackay, Farr; Alexander Sutherland, Brora.

DON. MACKINNON, M.A., *Professor.*

### LOGIC AND METAPHYSICS.

#### ADVANCED CLASS.

FIRST-CLASS CERTIFICATES.—1. A. W. M'Clymont, Roxburghshire, and Robert G. Paterson, M.A., Edinburgh—equal (*Bruce of Grangehill and Falkland Prize and Medals*); 3. Marion I. Gray, Edinburgh (*Elizabeth Hamilton Prize*).

SECOND-CLASS CERTIFICATE.—James Waterston, Edinburgh.

#### ORDINARY CLASS.

FIRST-CLASS CERTIFICATES.—1. John Handyside, Edinburgh, and R. M. Maciver, Stornoway—equal; 3. Mary S. Govan, Stirling

(*Medals*); 4. J. P. Lowson, Edinburgh, and S. S. Anderson, Edinburgh—equal; 6. C. D. O. Barrie, Dumfries, and J. A. Gunn, Kirkwall—equal; 8. W. S. Cameron, Perth; 9. R. F. Lindsay, Pittenweem; Isobel J. Trench, Dulwich; Liliac Macgregor, Dumfries; and John Smith, Larbert—equal; 13. John M'Laren, Callander; W. R. J. Gall, Edinburgh; Madeline G. Edgar, Edinburgh; Elizabeth F. Porter, Arbroath; and J. E. Dean, Bradford—equal (*Prizes*); 18. Daniel Johnstone, Cromarty; Margaret J. Ewan, Broughty Ferry; Harriet S. Nisbet, Edinburgh; J. L. Geddie, Edinburgh; J. A. Cameron, Stanley; and J. F. Robertson, Edinburgh—equal; 24. Peter Connell, Kirkcaldy; Charles G. Macpherson, Kingussie; Lilian S. Ross, Arbroath; and Elizabeth Smith, Aberdeen—equal; 28. William Landells, Edinburgh; D. H. Hislop, Edinburgh; W. L. Terrett, Yorkshire; Lizzie B. Murray, Edinburgh; and T. S. M'Intosh, Alva—equal; 33. Jane N. Lowson, Edinburgh; Stewart Waterston, Edinburgh; D. C. Gordon, Kingussie; Alice M. Jones, Dundee; and Shankar Nath. Jhang., Punjab, India—equal.

SECOND-CLASS CERTIFICATES.—Minnie Moore, Lauder; Duncan M'Diarmid, Callander; David Lees, Ayr; Cathie F. Lee, Edinburgh; Grace Fergie, Edinburgh; W. J. B. Selkirk, Edinburgh; Catherine R. Borland, Aberdeen; John Liddle, Orkney; J. M. Ritchie, Edinburgh; John Adamson, Edinburgh; G. S. Duncan, Darlington; Jeanie B. Smith, Edinburgh; A. W. G. Taylor, Tarbolton; H. W. Meikle, Edinburgh; Margaret A. M. Maclean, Muir of Ord; William Henderson, Dalkeith; Elizabeth Reid, Edinburgh; A. S. Robertson, Perth; Elizabeth P. Goodfellow, Dundee.

A. S. PRINGLE PATTISON, LL.D., *Professor.*

## MORAL PHILOSOPHY.

### HONOURS CLASS.

FIRST-CLASS CERTIFICATES.—1. Alexander C. M'Clymont, Edinburgh, and Robert G. Paterson, M.A., Edinburgh—equal (*Medals and Prizes*); 3. James Waterston, Edinburgh.

SECOND-CLASS CERTIFICATE.—4. Robert W. Stewart, M.A., B.Sc., London.

### ORDINARY CLASS.

FIRST-CLASS CERTIFICATES.—1. George G. Campbell, Inverness; 2. P. B. Mure Macaulay, Irvine, and George A. Smillie, Philpstoun—equal (*Medals*); 4. Helen M'Lachlan, Edinburgh; 5. J. R. Cuthbert, Ayr; J. Randolph Davidson, Camelon; and Agnes J. Monteath, Edinburgh—equal (*Prize*); 8. Thomas Alexander, M.A., Perth; Charles Goodall, Edinburgh; Mary C. Jolly, Edinburgh; and Duncan M'Diarmid, Callander—equal.

SECOND-CLASS CERTIFICATES.—12. John Macalpine, Edinburgh; 13.

John M'Laren, Callander ; 14. W. A. B. Gall, Elgin ; 15. James A. Cameron, Stanley ; 16. Ernest H. Wishart, Edinburgh ; 17. Jane M. Sime, Edinburgh ; 18. Donald C. Gordon, Kingussie ; Catherine A. Nicolson, Edinburgh ; and Alex. B. Robertson, Edinburgh—equal ; 21. William H. Allan, Edinburgh ; 22. Margaret J. Thompson, Alloa.

SPECIAL READING IN ARISTOTLE.—1. George G. Campbell, Inverness (*Prize*) ; 2. George A. Smillie, Philpstoun.

JAMES SETH, M.A., *Professor*.

## COMMERCIAL AND POLITICAL ECONOMY AND MERCANTILE LAW.

### HONOURS CLASS.

FIRST-CLASS CERTIFICATE AND PRIZE.—R. D. Bell, M.A., Edinburgh (*Medal*).

### ORDINARY CLASS.

PRIZES.—1. Alexander Mackie, M.A., Edinburgh (*Medal and Merchant Company's Prize of £10, 10s.*) ; 2. P. B. Mure Macaulay, Irvine (*George Watson's Prize*) ; 3. William H. Nelson, Rosewell (*Daniel Stewart's Prize*) ; 4. David G. Mitchell, B.Sc., Edinburgh ; 5. D. K. Cunnison, Edinburgh, and J. H. MacLagan-Wedderburn, Forfar—equal ; 7. G. Grant M'Kerron, Edinburgh.

FIRST-CLASS CERTIFICATES.—8. H. G. R. Leonard, India ; D. M. Maclean, Plockton ; and D. H. Wares, Wick—equal ; 11. Ethel Whalley, Lancashire ; 12. G. G. M'Quillen, Fife ; 13. John M. Hendrie, Dumfries ; 14. John G. Tosh, Brechin ; 15. Stewart Waterston, Edinburgh ; 16. John E. Geddes, Wick ; 17. James Murray, Galashiels ; 18. T. G. Young, Bathgate ; 19. W. G. Alexander, Leith, and John B. Marshall, Perth—equal ; 21. William Sutherland, Caithness.

ESSAYS.—Ethel Whalley and P. B. Mure Macaulay—equal (*Prizes*).

HONOURABLE MENTION FOR ONE ESSAY.—A. Mackie, H. G. R. Leonard, and W. H. Nelson—equal ; J. Murray.

J. SHIELD NICHOLSON, D.Sc., *Professor*.

## THEORY, HISTORY, AND ART OF EDUCATION.

FIRST-CLASS CERTIFICATES.—1. Alfred G. Hogg, M.A. ; 2. Janet S. M'Ewen (*Medallists*) ; 3. Peter D. Innes ; 4. Henry W. Meikle ; 5. Francis J. Gordon, M.A. ; 6. Mary J. Alison, William H. M'Diarmid, and George Wedderspoon, M.A.—equal ; 9. Alex. J. Ross ; 10. Robert C. Wallace and Christina G. Wilson—equal ; 12. John Morrison ; 13. Mary L. M. Elliot and Lizzie B. Murray—equal ; 15. Alex. J. Merriles ; 16. Jessie H. Lindsay, Lillias M'Gregor, and Janet R. Thomson—equal ; 19. John R. M.

Forbes; 20. Emily B. Copland; 21. Andrew Howieson and Geo. Mill—equal; 23. Harriet S. Nisbet; 24. William S. Cameron.

S. S. LAURIE, LL.D., *Professor.*

## MATHEMATICS.

### ADVANCED HONOURS CLASS.

FIRST-CLASS CERTIFICATES.—E. B. Ross, Edinburgh (*Prize and Medal*); A. Gray, Lochee.

\*A. R. Normand, Edinburgh; W. N. Prophet, Forfar.

\* Attending the Class for the second time, and not eligible for Prizes.

### INTERMEDIATE HONOURS CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—F. Ross, Coupar-Angus (*Medal*); A. J. Ritch, Orkney, and J. Anderson, Eskbank (*Prizes*); R. Van Cauwenberghe, Ghent, Belgium; G. W. Jones, Dundee; J. MacLagan-Wedderburn, Forfar.

SECOND-CLASS CERTIFICATES.—G. A. Carse, Edinburgh; G. S. Duncan, Edinburgh; J. D. Fulton, Edinburgh; R. Howden, Edinburgh; W. H. Nelson, Rosewell; A. J. Ross, Edinburgh; P. Ross, Thurso.

### SENIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. J. Gunn, Edinburgh; 2. A. King, Mid-Lothian (*Medals*); 3. Ogilvie, Forfar; 4. J. Black, Mid-Lothian; 5. H. H. Craw, Berwickshire, and P. D. Innes, Perth—equal; 7. J. B. Alexander, Wick; 8. J. C. H. Macnair, Edinburgh; 9. J. T. Johnstone, Edinburgh; 10. J. Kellie, Kilmarnock; 11. T. R. Gardiner, Cork, and D. Gibb, Methil—equal; 13. D. Bain, Edinburgh; 14. A. D. Stewart, Blairgowrie, and Miss J. B. T. Weir, Fauldhouse—equal.

SECOND-CLASS CERTIFICATES.—A. Barclay, Goupar-Angus; A. Downie, Alloa; J. M. Duthie, Edinburgh; T. M. Finlay, Edinburgh; C. P. Grant, Sutherland; Miss E. K. Herd, Edinburgh; D. Johnstone, Cromarty; W. M'Leod, Edinburgh; A. C. Mallace, Armadale; N. D. Mudie, Dundee; J. Munro, Thurso; J. E. Newlands, Edinburgh; R. W. Rae, Lockerbie; G. W. Scarth, Edinburgh; W. Scott, Edinburgh; Miss I. M. Towers, Portobello; W. Waddell, Kilwinning; G. D. Walker, Perth; C. Watt, Edinburgh; R. Wood, Ayton; R. Younger, Edinburgh.

The Newton Bursary in mathematics has been awarded to A. King, Mid-Lothian.

### JUNIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. H. Ireland, Forfar (*Medal*); 2. Miss A. M. Jones, Dundee; 3. J. Scott, Leith; 4. T. Mitchell, Blairgowrie.



SECOND-CLASS CERTIFICATES. — J. M. Bain, Hawick ; G. Dunn, Edinburgh ; R. Lawton, Innerleithen ; W. J. Shaw, Inverness ; J. Somerville, Edinburgh ; A. B. Webster, New Zealand ; G. Young, Edinburgh.

The Kelland Prize, open to members of the Junior Class of the previous winter session, has been awarded to A. J. Merriles, North Berwick.

G. CHRYSTAL, LL.D., *Professor.*

## NATURAL PHILOSOPHY.

### ADVANCED CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. G. Philip, Tarbat, Ross-shire (*Medal*) ; 2. W. Gentle, Edinburgh, and E. B. Ross, Edinburgh—equal.

SECOND-CLASS CERTIFICATE.—4. J. G. Sutherland.

### ORDINARY CLASS—HIGHER DIVISION.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. A. King, Mid-Lothian ; 2. J. Black, Mid-Lothian ; 3. W. Geddie, Edinburgh.

SECOND-CLASS CERTIFICATES.—4. J. B. Alexander, Caithness ; 5. W. Henderson, Mid-Lothian.

### LOWER DIVISION.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. A. S. Ogilvie, Broughty Ferry ; 2. P. D. Innes, Perth ; 3. D. H. Ash, Perth ; and A. H. Gardner, Edinburgh—equal (*Medallists*) ; 5. J. M. Robertson, Edinburgh ; 6. J. T. Johnstone, Edinburgh ; J. Smith, Stirlingshire ; and A. D. Stewart, Perthshire—equal ; 9. W. Eadie, Stirlingshire ; 10. G. D. Walker, Perth ; 11. Miss M. S. Hall, Roxburgh, and J. Jackson, Ayr—equal ; 13. A. R. Bee, Edinburgh ; 14. J. L. Pirie, Edinburgh ; 15. G. G. M'Quillen, Fifeshire ; 16. A. Howison, Edinburgh ; 17. W. Gemmill, Kilmarnock ; 18. Miss M. C. Jolly, Edinburgh ; 19. Miss E. J. Ross, Forfarshire ; 20. H. G. R. Leonards, India.

SECOND-CLASS CERTIFICATES.—21. Miss M. Adamson, Edinburgh ; W. R. Durham, Thurso ; and Miss J. J. M. Sibbald, Dumfriesshire—equal ; 24. H. Jamieson, Ayrshire, and A. C. Mallace, West Lothian—equal ; 26. Miss Jessie B. Bone, Cumberland ; A. R. Dallas, Edinburgh ; and J. Ogilvie, Forfar—equal ; 29. Miss H. K. Milne, Forfar, and R. J. Nicholson, Edinburgh—equal ; 31. Miss M. W. Cameron, Arbroath, and D. Lawson, Fife—equal ; 33. J. A. Todd, Edinburgh ; 34. W. S. Millar, Edinburgh, and D. W. Soote, Dundee—equal ; 36. Miss J. Gilmour, Bute ; 37. A. M'Lennan, Kingussie ; 38. D. Gibb, Fife ; 39. C. Innes, Edinburgh ; 40. Miss I. M. Towers, Portobello ; 41. T. F. Main, Northumberland ; 42. S. Couling, China.

PRIZE FOR ORDINARY CLASS EXAMINATIONS.—P. D. Innes.  
The Newton Bursary is awarded to P. D. Innes.

#### PHYSICAL LABORATORY.

NEIL ARNOTT SCHOLARSHIP.—A. J. Ritch.

DONALD FRASER BURSARY.—A. S. Ogilvie.

HIGHLY COMMENDED.—Robert Aitken, Miss E. MacRitchie, Miss H. K. Milne, J. A. A. Morrison, C. L. Philip, E. B. Ross—Summer, 1900; D. H. Ash, J. B. Alexander, A. King, R. F. Lindsay, A. S. Ogilvie, A. J. Ritch, F. Ross, A. W. Yakoubian—Winter, 1901.

P. G. TAIT, M.A., *Professor.*

#### INTERMEDIATE HONOURS.

FIRST-CLASS CERTIFICATES.—1. Alex. Gray, Lochee, Dundee (*Medal*), and D. P. Grubb, Dundee—equal; 3. G. A. Carse, Scotland.

SECOND-CLASS CERTIFICATES.—4. Robert Aitken, Hawick; 5. A. J. Ross, Scotland.

C. G. KNOTT, D.Sc., *Lecturer.*

#### CONSTITUTIONAL HISTORY.

##### HONOURS CLASS.

FIRST-CLASS HONOURS AND PRIZE.—Mary G. Williamson.

J. KIRKPATRICK, M.A., LL.D., *Professor.*

#### HISTORY.

##### HONOURS CLASS.

FIRST-CLASS CERTIFICATE.—Mary Gordon Williamson (*Medallist*).

##### ORDINARY CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. Alexander F. Jack (*Medallist*); 2. Evan M. Barron and Charles L. Riach—equal; 4. George M. Harper; 5. Ellen S. Paterson; 6. Ernest Shearer; 7. H. M. Cowan; 8. A. Mitchell; 9. Jeanie C. Rait; 10. Charles F. Allan.

SECOND-CLASS CERTIFICATES.—11. Charles L. Philip; 12. William Landells; 13. W. J. R. Gall; 14. John Douglas and M. G. S. Wallace—equal.

R. LODGE, M.A., *Professor.*

#### MODERN (EUROPEAN) HISTORY: 1715-1848.

FIRST-CLASS CERTIFICATES.—1. William B. Brander, Edinburgh (*Medal*); 2. David G. Mitchell, B.Sc., Edinburgh (*Prizes*); 3. Douglas G. Robertson, M.A., Edinburgh; 4. Thomas Fraser Scott, M.A., Cromarty.

SECOND-CLASS CERTIFICATES.—5. F. J. Gordon, M.A., Forfarshire ; 6. J. L. M'Callum, Cumberland ; 7. J. S. Allison, M.A., Edinburgh, and Kenneth Middleton, B.A., Ross—equal.

D. P. HEATLEY, *Lecturer.*

## FINE ART.

### GRADUATION COURSE.

MEDAL AND FIRST-CLASS PRIZE.—James Hamilton.

SECOND-CLASS PRIZE.—John M'Dougall.

THIRD-CLASS PRIZE.—Andrew Robertson.

FIRST-CLASS CERTIFICATES.—The above, and W. Phin Gillieson, John MacLagan.

COUSIN PRIZE FOR ESSAYS.—John M'Dougall.

### CLASSICAL ARCHÆOLOGY (HONOURS).

CERTIFICATE OF MERIT.—G. F. Dingemans.

G. BALDWIN BROWN, M.A., *Professor.*

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## Faculty of Science.

### SUMMER SESSION, 1900.

#### STRUCTURAL AND FIELD GEOLOGY.

1. J. B. Mears, England (*Medallist*) ; 2. Charles Macpherson, Laggan ; 3. Theo. B. Copeland, Scotland, and R. C. Wallace, Orkney—equal ; 5. John Cooper, Arbroath ; 6. David Clouston, Orkney ; C. Goodall, Scotland ; and David M. Johnstone, Scotland—equal ; 9. George S. Duncan, Scotland ; 10. Charles Lyall Philip, Scotland ; 11. James A. Gunn, Kirkwall ; Alex. Richardson, Scotland ; and R. G. Russel, Scotland—equal ; 14. Stewart Waterston, Scotland ; 15. James J. Macpherson, Scotland ; 16. J. H. MacLagan-Wedderburn, Forfar ; 17. D. S. Rabagliati, England ; 18. Donald C. Gordon, Scotland ; 19. John Anderson, Edinburgh ; J. A. A. Morrison, Kirkmichael ; and Cyril F. Walker, Tasmania—equal ; 22. John H. Melville, Scotland, and James Bruce Reid, Scotland—equal ; 24. A. J. Grant, M.B., Canada ; 25. Andrew Jamieson, Ayr ; 26. J. J. Goodchild, M.B., Canada ; Fred. S. Rose, M.B., Scotland ; and Henry Speirs, Berwickshire—equal.

JAMES GEIKIE, D.C.L., LL.D., *Professor.*

#### PETROLOGY.

1. John Falconer (*Medallist*) ; 2. R. D. Bell and David P. Grubb—equal ; 4. Theo. B. Campbell ; 5. R. Hamilton ; 6. Grace H. Jacob ; 7. J. S. Martyn.

JOHN S. FLETT, M.B., B.Sc., *Lecturer.*

ORGANIC CHEMISTRY.

1. David P. Grubb (*Medallist*); 2. Arthur W. Madsen; 3. Clark Ranken; 4. John Falconer; 5. Alexander Gray; 6. Robert Hamilton.

ALEX. CRUM BROWN, M.D., D.Sc., *Professor*.

MINERALOGY AND CRYSTALLOGRAPHY.

1. Charles Anderson (*Medallist*); 2. P. R. Chalmers; 3. Alexander Bruce; 4. J. K. H. Inglis.

HUGH MARSHALL, D.Sc., *Lecturer*.

ADVANCED ASTRONOMY.

1. George A. Russel, M.A.; 2. Alice B. Lennie, M.A.; 3. Janet M. Macqueen.

RALPH COPELAND, Ph.D., *Professor*.

PLANT PHYSIOLOGY.

1. Edward A. Elder, Edinburgh (*Medallist*); 2. Alexander L. Pearson, Carnoustie; 3. A. MacTier Pirrie, Edinburgh; 4. George S. Clark, Edinburgh.

A. W. BORTHWICK, B.Sc., *Lecturer*.

WINTER SESSION, 1900-1901.

ASTRONOMY.

1. Andrew J. Ritch and R. M. Shearer—equal (*Medal and 1st Prize, Honours Certificate*); 3. Ernest M. Anderson and Peter R. Chalmers—equal (*2nd Prize Honours Certificate*); 5. Thomas S. Lindsay (*Honours Certificate*); 6. George S. Duncan (*Second Class Certificate, Arts*); 7. William R. Bruce (*Second Class Certificate, Arts*); 8. Robert Hamilton (*Honours Certificate*); 9. Walter A. Forsyth (*Honours Certificate*).

RALPH COPELAND, Ph.D., *Professor*.

SYSTEMATIC GEOLOGY AND MINERALOGY.

- HONOURS CERTIFICATES.—1. J. E. F. Campbell, Calcutta (*Medallist*); 2. Archibald Milne, Edinburgh; 3. J. M. Ritchie, Edinburgh, and Robert C. Wallace, Orkney—equal; 5. David G. Mitchell, Scotland; 6. Wm. G. Robertson, Scotland; 7. John Paterson, Ayr; 8. David Tait, Edinburgh; 9. Stewart Waterston, Scotland; 10. Peter White, Scotland; 11. Margaret Adamson, Edinburgh; 12. E. S. Edie, Anstruther, and A. Howe Gardner, Edinburgh—equal; 14. G. D. Mathewson, Scotland; 15. Wm. T. Rogers, Dundee; 16. John Liddle, Scotland.

JAMES GEIKIE, D.C.L., LL.D., *Professor*.

# PRACTICAL GEOLOGY AND MINERALOGY.

HONOURS CERTIFICATES.—1. Robert Burns Young (*Medallist*); 2. J. E. F. Campbell, Calcutta; 3. James Chalmers, Scotland, and David G. Mitchell, Edinburgh—equal; 5. Peter White, Tayport; 6. Archibald Milne, Edinburgh, and Robert C. Wallace, Orkney—equal; 8. J. W. Romanes, Edinburgh; 9. Wm. T. Rogers, Dundee; 10. W. A. K. Christie, Edinburgh; 11. E. S. Edie, Anstruther; 12. James B. Rodger, Forfar, and Margaret Adamson, Edinburgh—equal; 14. George S. Clark, Edinburgh, and A. L. Pearson, Carnoustie—equal.

Alice B. Lennie having attended the class in a previous session was ineligible for the Class Medal, but obtained the same number of marks as the Medallist, and was awarded a Special Prize.

GRADUATION HALF-COURSE FOR M.A.—The following obtained Honours Certificates:—John Paterson, Ayr; David Clouston, Orkney; J. A. A. Morrison, Alex. Howie Gardner; James D. Macpherson, and John Liddle, Orkney.

JOHN S. FLETT, M.A., M.B., D.Sc., *Demonstrator*.

JAMES GEIKIE, D.C.L., LL.D., *Professor*.

# SYSTEMATIC ENGINEERING.

1. Alfred H. Armstrong (*Medallist*); 2. Alexander Richardson; 3. A. F. M. Clark; 4. R. G. Russell (*Prizes*); 5. Walter Linton; 6. J. Weir M'Kerrow; 7. Cyril T. Walker; 8. Alexander Kerr.

W. HUME KERR, M.A., B.Sc., *Interim Professor*.

# GEOMETRICAL AND MECHANICAL DRAWING.

1. Alexander Richardson (*Medal*); 2. Alfred H. Armstrong (*Prize*); 3. R. G. Russel; 4. Cyril T. Walker; 5. Walter Linton; 6. John A. A. Morrison; 7. A. F. M. Clark.

W. HUME KERR, M.A., B.Sc., *Lecturer*.

# DYNAMICS (ENGINEERING).

FIRST-CLASS HONOURS.—1. R. G. Russell, Scotland, and C. T. Walker, Tasmania—equal (*Medallists*).

SECOND-CLASS HONOURS.—3. A. F. M. Clark, Scotland; 4. A. H. Armstrong, Ireland.

C. G. KNOTT, D.Sc., *Lecturer*.

# AGRICULTURAL AND RURAL ECONOMY.

1. John Trotter, Edinburgh; 2. Cuthbert Carter, Mill Hill, Middlesex, and Fred. Smith, Macclesfield—equal (*Medallists*); 4. D. S. Raba-gliati, Bradford, Yorks; 5. John R. Dale, North Berwick; 6. W. J. Colebatch, Adelaide, South Australia; 7. J. D. Macintyre,

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Greenock; 8. J. S. Fraser, Edinburgh; 9. J. G. Wilson, Edinburgh, and J. L. M'Donald, Inverness—equal.

SATURDAY FARM EXCURSION REPORTS.—Fred. Smith (*Medal*); John Trotter (*Book Prize*).

STEVEN SCHOLARSHIP OF ABOUT £70.—Fred. Smith and D. S. Rabagliati—equal.

VANS DUNLOP SCHOLARSHIP IN AGRICULTURE AND RURAL ECONOMY.—William Bruce, B.Sc.

GARTON LECTURES ON COLONIAL AND INDIAN  
AGRICULTURE.

1. Fred. Smith and Samuel Simpson—equal (*Medallists*); 3. John Trotter (*Book Prize*); 4. Thomas Usher; 5. H. S. Long.

ROBERT WALLACE, *Professor*.

AGRICULTURAL CHEMISTRY.

ADVANCED CLASS.—1. D. S. Rabagliati; 2. W. J. Colebatch.

ORDINARY CLASS.—1. Fred. Smith (*Medallist*); 2. Thomas Usher;  
3. John R. Dale; 4. John Anderson.

A. P. AITKEN, M.A., D.Sc., *Lecturer*.

AGRICULTURAL ENTOMOLOGY.

1. H. C. Long (*Medallist*); 2. W. Bruce, B.Sc.; 3. Fred. Smith; 4. John Anderson.

W. FREAM, LL.D., B.Sc., *Lecturer*.

FORESTRY.

1. W. Bruce, Montrose, and Thomas Usher, Hawick—equal (*Medals and Prizes*); 3. Harold C. Long, Cheshunt, Herts; 4. D. S. Rabagliati, Bradford; 5. John R. Dale, North Berwick; 6. James B. Reid, Wigtown, and Matthew Feaks, Dumfries—equal; 8. James L. M'Donald, Inverness.

FRED. BAILEY, *Lecturer*.

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*Faculty of Divinity.*

WINTER SESSION, 1900-1901.

DIVINITY.

THIRD YEAR.

PRIZEMEN.—1. William A. Curtis, M.A.; 2. William A. Dunnett, M.A.; 3. Henry C. Duncan, M.A.; 4. A. S. Ballantyne, M.A., and James Kirk, M.A.—equal.



SECOND YEAR.

PRIZEMEN.—1. Oswald B. Milligan, M.A., and William A. Mowat, M.A.—equal; 3. Andrew M. Anderson, M.A.

HONOURABLE MENTION.—1. David Heggie, M.A.; 2. David Sawers, M.A.

FIRST YEAR.

PRIZEMEN.—1. J. Bryce Jamieson, M.A., and Adam Mackay, M.A.—equal; 3. George V. Dunnett, M.A.

HONOURABLE MENTION.—1. James Fleming, M.A.

R. FLINT, D.D., *Professor.*

BIBLICAL CRITICISM AND BIBLICAL ANTIQUITIES.

1. Oswald B. Milligan, M.A., Edinburgh, and David Nelson, M.A., Edinburgh—equal (*Medallist*); 3. William A. Dunnett, M.A., Kilmarnock; 4. Henry C. Duncan, M.A., Edinburgh, and Archibald S. Ballantyne, M.A., Galashiels—equal; 6. George H. Donald, M.A., Mertoun.

HONOURABLE MENTION.—William A. Mowat, M.A.; James Kirk, M.A.

JOHN PATRICK, D.D., *Professor.*

ECCLESIASTICAL HISTORY.

PRIZEMEN.—1. William A. Curtis, M.A., Edinburgh (*Medallist*); 2. A. Scott Ballantyne, M.A., Edinburgh, and Adam Mackay, M.A., Forfar—equal; 4. J. Bryce Jamieson, M.A., Portobello; 5. William Murdie, M.A., Sutherlandshire; 6. David Nelson, M.A., Edinburgh.

HONOURABLE MENTION.—1. Alex. B. Robb, M.A., Armadale; 2. Henry C. Duncan, M.A., Edinburgh, and George Victor Dunnett, M.A., Kilmarnock.

M. C. TAYLOR, D.D., *Professor.*

HEBREW AND SEMITIC LANGUAGES.

SENIOR HEBREW.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. Oswald B. Milligan, M.A., Edinburgh (*Medallist*); 2. Macduff F. Simpson, M.A., Edrom; William A. Mowat, M.A., London, and David H. Sawers, M.A., Edinburgh—equal.

SECOND-CLASS CERTIFICATE OF MERIT.—5. E. G. Perry, B.A., Canada.

JUNIOR HEBREW—DIVINITY SECTION.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. Adam Mackay, M.A., Forfar (*Medallist*); 2. George Victor Dunnett, M.A., Kilmarnock.

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SECOND-CLASS CERTIFICATES OF MERIT.—3. J. B. Jamieson, M.A., Portobello; 4. James A. Fleming, M.A., Dalkeith.

JUNIOR HEBREW—ARTS SECTION.

SECOND-CLASS CERTIFICATES OF MERIT.—1. Thomas Alexander, Perth (*Prizeman*); 2. J. M'Murtrie, Edinburgh; 3. Ernest Lawson, Fifeshire.

SENIOR ARABIC.

SECOND-CLASS CERTIFICATES OF MERIT.—M. A. Samad, Hyderabad, and M. F. Simpson, M.A., Edrom—equal.

JUNIOR SYRIAC.

PRIZE AND FIRST-CLASS CERTIFICATE OF MERIT.—Oswald B. Milligan, M.A., Edinburgh.

SECOND-CLASS CERTIFICATE.—D. C. Davidson, M.A., Edinburgh.  
A. R. S. KENNEDY, D.D., *Professor.*

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## Faculty of Law.

### SUMMER SESSION, 1900.

#### CIVIL LAW.

1. W. H. Meikle, M.A., Edinburgh (*Muirhead Prize*); 2. M. Millar Craig, M.A., Edinburgh; 3. B. S. Bramwell, B.A. Cantab. ((*Prizemen*)); 4. T. J. Carlyle Gifford, M.A., Edinburgh; 5. James Smith Clark, M.A., Edinburgh; 6. D. Oswald Dykes; H. L. F. Fraser, M.A., Aberdeen; J. S. Kinghorn, M.A., Edinburgh—equal; 9. J. W. Somerville.

JAMES MACKINTOSH, LL.D., *Professor.*

#### SCOTS LAW.

1. James Ireland, Forfarshire; 2. W. R. Millar, Forfarshire; 3. Andrew Nicoll, Fifeshire; 4. Duncan M. Burden, M.A., Forfarshire (*Prizemen*); 5. David Ovens Drummond, Roxburghshire; 6. Maurice Miller, Mid-Lothian; 7. James B. Mackie, Lanarkshire; 8. William Robertson, jun., Mid-Lothian; 9. John Aitken, Morayshire; 10. Alexander Hogg, Forfarshire; 11. A. C. M. Bell, Mid-Lothian; 12. James B. Connon, Kincardineshire; 13. Arthur S. Dickson, Perthshire, and George Crichton, Forfarshire—equal; 15. W. H. Meikle, Argyllshire; 16. G. W. B. Campbell, Mid-Lothian; 17. James L. Henderson, Stirlingshire; 18. J. Wemyss Renton, Mid-Lothian; 19. J. S. Brown, Stirlingshire; 20. W. H. Gray, Lanarkshire; 21. W. F. French, Mid-Lothian; 22. Alexander Doig, Fifeshire; 23. Thomas Henderson, Dumfriesshire.

ESSAY PRIZES.—1. James Ireland; 2. William Robertson, jun.

JOHN RANKINE, Q.C., M.A., LL.D., *Professor.*

### FORENSIC MEDICINE.

1. B. S. Bramwell (*Medallist*); 2. H. M. Simson; 3. John M. Hunter and F. R. Sanderson—equal; 5. Charles Jamieson; R. W. Lyall Grant; J. D. Dallas; T. J. Carlyle Gifford; Robert F. Irving; J. H. Macdonald; and Wm. Robertson, jun.—equal; 12. Robert Hendry; A. Morrice Mackay; M. Millar Craig; John Falconer; J. C. Fenton; and J. S. Kinghorn—equal.

FOR THE BEST NOTICE OF THE DEATH OF THE POET CHATTERTON.—  
J. H. Macdonald.

HENRY D. LITTLEJOHN, Kt., M.D., *Professor*.

### INTERNATIONAL PRIVATE LAW.

1. Alexander Stuart, Edinburgh; 2. F. R. Sanderson, Edinburgh (*Prizemen*); 3. J. C. Fenton, Portobello; 4. A. A. Fraser, Dunfermline; 5. M. Millar-Craig, Edinburgh, and F. C. Thomson, Edinburgh—equal; 7. D. M. Burden, Dundee; 8. W. Smith, Edinburgh.

SPECIAL CERTIFICATE.—Mataichu Mizusaki, Japan.

N. J. D. KENNEDY, M.A., *Lecturer*.

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### WINTER SESSION, 1900-1901.

#### PUBLIC LAW.

PRIZEMEN—1. A. Morrice Mackay and J. F. Milne—equal; 2. J. S. Kinghorn; W. Mitchell-Thomson; and F. C. Thomson—equal.

HONOURS.—6. A. S. Pringle; W. Ferguson MacLagan; and T. Gillespie—equal; 9. A. White and J. Williamson—equal; 11. J. Y. Sutherland; 12. J. Gordon Jameson; W. Smith; and S. A. Gillon—equal; 15. W. Smith Clark; 16. H. L. F. Fraser and Hardy Philip; 18. J. Beattie; 19. J. Wright; 20. J. Scobie.

ESSAY PRIZE.—A. White.

L. J. GRANT, Bart., B.A., *Professor*.

#### CIVIL LAW.

1. J. M. Hunter; 2. R. W. Lyall Grant, M.A., Aberdeen; 3. W. Mitchell Thomson, B.A., Oxon. (*Prizeman*); 4. W. Smith, M.A., Edinburgh; 5. J. D. Little and W. F. MacLagan—equal; 7. Charles Jamieson, M.A., Edinburgh and W. Robertson, jun.—equal; 9. A. M. Laing, M.A., Aberdeen; 10. H. J. More; 11. D. Oswald Dykes; J. Macdonald; and M. M. C. Urquhart—equal; 14. R. W. Cockburn, M.A., Edinburgh; D. Kennedy; and J. A. D. Murdoch—equal; 17. A. D. E. Mathison; 18. F. C. Budge, M.A., St Andrews, and A. Harper—equal.

JAMES MACKINTOSH, LL.D., *Professor*.

# CONSTITUTIONAL LAW AND HISTORY.

1. Charles L. Philip; 2. Ernest H. Wishart; 3. George M. Harper (*Prizemen*); 4. H. M. Cowan; Alfred M. Laing, M.A.; and John F. Milne—equal; 7. James A. D. Murdoch; James Scobie; and John V. Sutherland—equal; 10. Hardy Philip, M.A., B.L., and W. Purves Boyes—equal; 12. Andrew Hamilton Scott.

HONOURABLE MENTION.—1. Samuel Couling; R. W. Lyall Grant, M.A.; and John M'Michael.

J. KIRKPATRICK, M.A., LL.D., *Professor.*

# SCOTS LAW.

1. Andrew Meikle, Mid-Lothian (*Thow scholar*); 2. Thomas J. Addly, Forfarshire; 3. Byrom S. Bramwell, B.A., Cantab., Northumberland; 4. John Hodge, Selkirkshire; 5. A. M. Mackay, M.A., Aberdeen, B.A., Cantab., Aberdeenshire; 6. Alexander Y. Adam, England; 7. James Allison, jun., Mid-Lothian; and 8. John L. Jack, Caithness-shire (*Prizemen*); 9. Arthur John Rew, Forfarshire; 10. J. Smith Clark, Mid-Lothian; 11. John Charles Fenton, Mid-Lothian; 12. Allan S. Freer, Roxburghshire; 13. Charles B. Ramsay, Forfarshire; 14. David Miller; 15. W. R. Donald, Forfarshire; 16. John B. M'Donald, Forfarshire; 17. George R. Lamb, Perthshire; 18. Alexander Mackintosh, Inverness-shire; 19. David Logan, Mid-Lothian; 20. John M. Hunter, England; 21. Charles William Howden, Mid-Lothian; 22. A. S. Pringle, B.A., Cantab., Mid-Lothian.

EXTRA PRIZE (*hors concours*).—John M. Vallance, Mid-Lothian.

JOHN RANKINE, K.C., M.A., LL.D., *Professor.*

# CONVEYANCING.

1. James Ireland, Forfarshire (*Thow scholar*); 2. A. C. Montgomerie Bell, Mid-Lothian; 3. Grigor W. B. Campbell, Mid-Lothian; 4. David O. Drummond, Roxburghshire; 5. Arthur S. Dickson, Perthshire; 6. Robert T. Milne, Aberdeenshire; 7. Thomas Forrest, Lanarkshire; 8. William Forrest French, Mid-Lothian, and Andrew Nicoll, jun., Fifeshire—equal (*Prizemen*); 10. James L. Henderson, Stirlingshire; 11. Maurice Miller, Mid-Lothian; 12. William M'Kelvie Henderson, Dumfriesshire; 13. William Robertson, jun., Mid-Lothian; 14. George Crichton, Forfarshire; 15. William M. Brown, Mid-Lothian, and Francis M. Johnston, Mid-Lothian—equal; 17. Roger H. Leitch, Fifeshire; 18. George Rennie, Mid-Lothian; 19. Neil H. Lees, Haddingtonshire; 20. John Ross, Forfarshire; 21. Duncan M'Nab Burden, Forfarshire; 22. James B. Mackie, Lanarkshire; 23. William G. Greenfield, Lanarkshire.

JOHN L. MOUNSEY, W.S., *Professor.*

PROCEDURE AND EVIDENCE.

PRIZE.—D. M. Burden, M.A., Dundee.

FIRST-CLASS HONOURS.—D. P. Fleming, Edinburgh.

J. J. COOK, LL.B., *Lecturer.*

*Faculty of Medicine.*

SUMMER SESSION, 1900.

ELEMENTARY BOTANY.

FIRST-CLASS HONOURS.—1. James P. Lowson, Belfast ; 2. Philip A. Harry, Jamaica ; 3. John Smith, Ayr ; 4. John P. McGowan, Dumfries ; and 5. James Craw, Berwickshire, Scotland (*Medallists*) ; 6. James A. Gunn, Kirkwall ; 7. Thomas Addis, Edinburgh, and Charles McNeil, Scotland—equal ; 9. Alex. Macrae, Scotland, and Fred. J. G. Tocher, Scotland—equal ; 11. Robert Donaldson, M.A., Musselburgh ; William Lumsden, England ; N. N. Geo. C. McVean, Scotland ; and A. MacTier Pirrie, Edinburgh—equal ; 15. Francis Aitken, Dundee ; Innes Brehner, Orange Free State ; Murray L. Cohen, Canada ; James M. Graham, Edinburgh ; and Lindsay S. Milne, Scotland—equal.

SECOND-CLASS HONOURS.—20. William Grant, Arbroath ; 21. Wm. P. Beattie, Glasgow, and Eustace M. Simmers, England—equal ; 23. David Brown, Roxburghshire, and D. W. Sibbald, New Zealand—equal ; 25. John M'P. Grant, Inverness ; 26. Aloysius C. Pickering, England ; 27. Wm. Jarvis, Edinburgh, and J. P. S. Jamieson, Shetland—equal ; 29. T. S. Coulson, England ; J. W. H. Babbington, Ireland ; and W. J. Fraser, Ceylon—equal ; 32. W. H. Simpson, New Zealand ; R. Clive Walker, Edinburgh ; and W. M. Munby, England—equal ; 35. William Anderson, Castle-Douglas, and W. J. B. Selkirk, Aberdeen—equal ; 37. John Jardine, Penicuik ; B. H. Watt, Elgin ; James Lochead, M.A., Earliston ; S. A. McClintock, Londonderry ; C. S. Ryles, India ; and W. W. Greer, Queensland—equal ; 43. G. S. Landon, England, and H. R. Macintyre, China—equal ; 45. H. J. Norman, England ; 46. F. A. Hanan, New Zealand ; 47. J. Trotter, Scotland, and H. V. Goldstein, New Zealand—equal ; 49. H. M. Thompson, England ; Hector B. Morris, Scotland ; K. U. A. Inniss, Trinidad ; and J. S. Mitchell, Scotland—equal ; 53. J. Lindsay, London, and J. D. Harmer, Linlithgow—equal ; 55. F. R. Sinton, Scotland ; 56. James Mackenzie, Inverness ; G. Hadden, Ireland ; R. A. Chapman, England ; and J. F. James, England—equal ; 60. J. Robinson, England ; M. M. Mamourian, Smyrna ; and D. H. C. McArthur, Wakefield—equal ; 63. J. A. Cruickshank, Scotland, and John McDowall, Scotland—equal

65. Thomas Campbell, Scotland; H. E. A. Washbourn, New Zealand; and H. D. Robb, Dumfries—equal; 68. D. M. C. Church, Scotland, and T. E. Roberts, Scotland—equal; 70. R. Balfour Barnetson, Edinburgh; 71. A. J. Lewis, India; A. C. M'Master, New Zealand; and J. S. Kinross, Scotland—equal.

## ELEMENTARY PRACTICAL BOTANY.

### CLASS A.

FIRST-CLASS HONOURS.—1. Eust. M. Simmers, England; 2. Wm. Lumsden, England (*Medallists*); 3. John Lindsay, London; 4. John Trotter, Scotland; W. P. Beattie, Scotland; David Brown, Roxburghshire; and Philip A. Harry, Jamaica—equal; 8. Hugh R. Macintyre, China; S. Alwyn Smith, England; and Thomas Addis, Edinburgh—equal; 11. Fred. Ritchie Sinton, Scotland; James Scott Kinross, Scotland; and C. T. Ayna, India—equal.

SECOND-CLASS HONOURS.—14. James Craw, Berwickshire, and James Lochhead, M.A., Earlston—equal; 16. J. H. H. Joubert, Cape Colony; Basil Harry Watt, Elgin; and A. M. Pirrie, Edinburgh—equal; 19. John Smith, Ayrshire; W. J. E. Bell, Dumbarton; Hugh A. Edwards, Motherwell; James Mackenzie, Inverness; and Hubert J. Norman, England—equal; 24. J. C. D. Allan, India, and W. M. Munby, England—equal; 26. Robert H. Watt, Scotland, and James M. Barkley, Ireland—equal; 28. N. N. Geo. C. M'Vean, Scotland; R. Clive Walker, Edinburgh; and W. Anderson, Castle-Douglas—equal.

### CLASS B.

FIRST-CLASS HONOURS.—1. J. P. Lowson, Ireland; 2. Alex. M'Rae, Scotland (*Medallists*); 3. J. A. Gunn, Orkney; 4. Innes Brebner, Orange Free State, and G. Stirling Landon, England—equal; 6. W. H. Simpson, New Zealand; F. T. Bowerbank, Penrith; Murray L. Cohen, Canada; and Francis Aitken, Dundee—equal; 10. Thomas Scoresby-Jackson, London; John D. Harmer, Linlithgow; and William Grant, Arbroath—equal; 13. John P. M'Gowan, Dumfries; J. W. Herbert Babington, Ireland; and Joseph Robinson, England—equal.

SECOND-CLASS HONOURS.—16. G. Ormrod, Cumberland; F. A. Hanan, New Zealand; John S. Caldwell, Schotts; and W. W. Greer, Queensland—equal; 20. Fred. Smith, England; 21. Oney Mortimer Gericke, South Africa, and Charles J. Smith, Edinburgh—equal; 23. John Warnock Bingham, Ireland; David C. Alexander, Selkirk; and Richard A. Chapman, England—equal; 26. William Jarvis, Edinburgh; Samuel Alex. M'Clintock, Londonderry; and R. W. L. Wallace, Turriff—equal; 29. J. S. Peebles, Scotland, and R. Lloyd Jones, Wales—equal.



FOR DRAWINGS, ILLUSTRATING WORK DONE DURING THE SESSION.

FIRST-CLASS HONOURS.—1. Basil H. Watt, Elgin; 2. Joseph Robinson, B.Sc., England, and A. Stuart Mactavish, Kelso—equal; 4. John Gibson Craig, Scotland; 5. W. E. Reynolds, Portugal (*Prizemen*).

SECOND-CLASS HONOURS.—6. Philip A. Harry, Jamaica; 7. Fred. T. Bowerbank, Penrith; 8. Robert Donaldson, Musselburgh; 9. Wm. Anderson, Castle-Douglas; 10. W. J. E. Bell, Dumbarton, and Patrick Steele, Edinburgh—equal; 12. Wm. Lumsden, England.

FOR MICROSCOPIC PREPARATIONS MADE DURING THE SESSION.

FIRST-CLASS HONOURS.—1. Alexander M'Tier Pirrie, Edinburgh; 2. W. M. Munby, England; 3. John Trotter, Scotland (*Prizemen*).

SECOND-CLASS HONOURS.—4. Innes Brebner, Orange Free State; 5. J. P. Lowson, Belfast; 6. George Blair, Scotland; 7. P. G. Norman, England.

ISAAC BAYLEY BALFOUR, M.D., D.Sc., *Professor*.

ELEMENTARY ZOOLOGY.

FIRST-CLASS HONOURS.—1. James Craw; 2. Robert Donaldson, M.A. (*Medallists*); 3. D. Brown and Charles M'Neil—equal; 5. Wm. Jarvis; 6. W. Torrance Smith; 7. Thos. E. Coulson and J. M. Graham—equal; 9. Hugh R. Macintyre.

SECOND-CLASS HONOURS.—10. G. F. Dingemans; 11. P. Steele; 12. George S. Landon; 13. N. N. G. C. M'Vean; 14. D. H. C. Macarther; 15. A. M. Pirrie and J. R. Robertson—equal; 17. R. B. Barnetson and Edward Sharpe—equal; 19. J. C. D. Allan and R. H. Watt—equal; 21. W. J. Fraser and R. Clive Walker—equal; 23. W. W. Greer; 24. A. J. Lewis and D. R. P. Walther—equal; 26. Hector B. Morris; 27. G. T. Drummond; 28. J. M. R. Flament; C. J. Smith; J. S. R. Weir; and B. H. Watt—equal; 32. G. Percy Joy and C. S. Ryles—equal; 34. M. M. Mamourian and C. D. O'Neil—equal; 37. D. S. Murray; 38. M. M. Baird.

PRACTICAL ZOOLOGY.

FIRST-CLASS HONOURS.—1. James Craw; 2. W. J. Fraser; 3. R. B. Barnetson (*Medallists*); 4. R. Donaldson, M.A.; 5. W. T. Smith; 6. J. E. Coulson and G. P. Joy—equal.

SECOND-CLASS HONOURS.—8. C. J. Smith and W. H. Welsh—equal; 10. D. S. Murray; H. M. Thompson; and D. R. P. Walther—equal; 13. D. Brown; H. R. Macintyre; H. B. Morris; B. H. Watt; and C. S. Ryles—equal; 18. J. C. D.

## 482 *Faculty of Medicine—Class Prize and Honours Lists.*

Allan; J. M. Graham; W. L. Johnston; A. J. Lewis; W. L. Locke; J. W. M'Ewan; A. M. Pirrie; and H. M. Sauzier—equal.

J. C. EWART, M.D., *Professor.*

### PRACTICAL CHEMISTRY.

FIRST-CLASS HONOURS.—1. J. D. Fulton (*Medallist*); 2. D. Clouston; 3. R. C. Wallace.

SECOND-CLASS HONOURS.—4. A. Little.

ALEX. CRUM BROWN, M.D., *Professor.*

### PHYSICS.

FIRST-CLASS HONOURS.—1. E. Henderson and E. M. Simmers—equal (*Medallists*); 3. T. Campbell; 4. W. M. Munby and A. C. M'Master—equal.

SECOND-CLASS HONOURS.—6. F. J. G. Tocher; 7. F. Aitken, P. A. Harry and W. Lumsden—equal; 10. T. Addis; 11. J. Jardine; 12. J. Ings; 13. W. Anderson and J. H. H. Joubert—equal; 15. W. J. E. Bell, J. S. Mitchell, H. Simpson, and H. E. A. Washbourn—equal; 19. F. R. Sinton; 20. G. Hadden; 21. J. P. S. Jamieson, J. Lindsay, and D. W. Sibbald—equal; 24. J. R. Bartholomew, F. A. Hannan, and T. Robertson—equal; 27. M. L. Cohen, L. S. Milne, H. J. Norman, and T. Scoresby-Jackson—equal; 31. H. Goldstein, H. J. D. Harmer, and K. U. A. Inniss—equal.

P. G. TAIT, M.A., *Professor.*

### SENIOR PRACTICAL ANATOMY.

FIRST-CLASS HONOURS.—1. J. M. Kirkness, Edinburgh, and W. M. Selby, Wigtownshire—equal (*Medallists*); 3. A. A. Hall, Leith; 4. E. A. King, Ireland; 5. John Hunter, Musselburgh, and David Sandler, Russia—equal; 7. J. C. G. Carmichael, Calcutta, and Wm. Hume, Australia—equal; 9. F. C. Drew, S. Africa; 10. D. E. Derry, Surrey; 11. G. D. Sloan, Lanark; 12. W. C. P. White; 13. George Wight, Edinburgh; 14. W. L. L. Alston, South America.

SECOND-CLASS HONOURS.—1. Wm. Blackwood.

### JUNIOR PRACTICAL ANATOMY.

FIRST-CLASS HONOURS.—1. T. B. Mouat, Haddington; W. Sibbald Robertson, Berwickshire; and A. C. Strain, Blairgowrie—equal; 4. D. W. Boswell, Norfolk; J. M. Dewar, Edinburgh; T. H. Easton, Wigtownshire; J. A. Glover, Dumfries; and W. C. Morton, Trinidad—equal; 9. R. A. Chambers, Perth; R. S. Enever-Todd, Musselburgh; N. C. Forsyth, Mull; H. M. Gil-

lespie, Kirkcudbrightshire; G. H. Skinner, Forfarshire; and John Tait, Orkney—equal; 15. Wm. Maclaren, Arbroath; 16. John Saffley, Dumfriesshire, and T. T. Thompson, India—equal; 18. G. W. Armstrong, Wales; Angus Buchanan, Argyleshire; F. D. Crosthwaite, Edinburgh; G. J. Farie, Bridge of Allan; and D. P. D. Wilkie, Kirriemuir—equal; 23. A. S. L. Biggart, West Hartlepool; W. H. Forsyth, Fife; and C. R. P. Mitchell, Glasgow—equal; 26. A. R. Berrie, India; J. J. H. Ferguson, Cardiff; J. B. McNeill, Edinburgh; and W. A. Wilson-Smith, Berwickshire—equal; 30. C. S. Crichton, Arbroath; H. S. Reid, Edinburgh; F. G. Saleeby, Palestine; A. N. J. Vizarat, Hyderabad; and W. B. Wishart, Edinburgh—equal; 35. R. J. Mackessack, Forres; A. W. Neill, Edinburgh; and Thomas Peebles, Edinburgh—equal; 38. Archd. Oliver, Edinburgh; 39. A. G. Glass, Morayshire.

SECOND-CLASS HONOURS.—1. J. B. Lockerbie, Edinburgh; 2. Archd. Simpson, Tranent.

D. HEPBURN, M.D., *Lecturer.*

WM. TURNER, K.C.B., M.B., *Professor.*

#### PRACTICAL PHYSIOLOGY (HISTOLOGY).

FIRST-CLASS HONOURS.—1. F. W. Lundie, Cape Colony, and T. T. Thomson, India—equal; 3. R. van Someren, Straits Settlements; 4. Alex. Gray, Perthshire, and J. M. Kirkness, Scotland—equal (*Medallists*); 6. J. Henderson Smith, Edinburgh; 7. A. W. Neill, Edinburgh; S. R. T. G. Aickin, New Zealand; J. P. MacGowan, Dumfries; and D. P. Marais, So. Africa—equal; 11. H. S. Davidson, Melrose; E. G. Girdwood, So. Africa; and John Tait, Orkney—equal; 14. C. S. Crichton, Arbroath, and Jas. Girdwood, Scotland—equal; 16. A. C. Geddes, London; J. B. McNeill, Edinburgh; and W. A. Wilson-Smith, Scotland—equal; 19. R. A. Chambers, Perth, and A. Lundie, Scotland—equal; 21. J. M. Dewar, Scotland; R. J. Mackessack, Scotland; C. R. P. Mitchell, Glasgow; and Wm. Sanderson, Tranent—equal.

SECOND-CLASS HONOURS.—25. A. R. Berrie, India; G. J. Farie, Bridge of Allan; C. R. Gibson, Carlisle; G. D. Mathewson, Dunfermline; and J. B. Mears, England—equal; 30. J. A. Duggan, Ireland; G. W. Harty, New Zealand; I. M. Macrae, Scotland; R. M. Walker, Scotland; and G. J. Wenzel, Cape Colony—equal; 35. G. S. Clark, Edinburgh; T. H. Easton, Scotland; A. G. Glass, Scotland; C. F. A. Oberlander, Cape Colony; and Thomas Peebles, Edinburgh—equal; 40. Jas. Lochhead, Earlston, and P. W. Mason, New Zealand—equal; 42. Daniel Allison, Scotland; W. E. Knight, Dublin; T. B. Mouat, Haddington; F. A. Wille, Cape Colony—equal; 46. J. D. Giles, Edinburgh; J. O. Heyns, Cape Colony; A. F. Hughes, Grenada; J. H. Kay,

Scotland ; John Lovett, England ; H. C. Martin, Ireland ; and W. C. Morton, Trinidad—equal ; 53. C. H. Craig, Scotland ; D. H. Croom, Edinburgh ; and A. O. P. Reynolds, Surrey—equal ; 56. I. C. Keir, England ; and Gordon S. Mackay, Aberfeldy—equal ; 58. D. G. Addison-Scott, Arbroath ; A. Oliver, Scotland ; Labbhu Ram, India ; and C. H. Wright, England—equal ; 62. T. F. Campbell, England ; J. A. Glover, Dumfries ; A. E. Hodgson, England ; and Robert Veitch, Scotland—equal ; 66. F. S. Brennan, Ireland ; C. G. Edmonston, Scotland ; and J. A. Ross, Perth—equal ; 69. G. W. Armstrong, Wales ; D. W. Boswell, Norfolk ; H. S. Coghill, Edinburgh ; R. S. Enever-Todd, Edinburgh ; and L. A. H. Lack, Trinidad—equal ; 74. W. B. Cullen, Carlisle ; A. Dangerfield, Edinburgh ; S. E. Douglas, Bournemouth ; H. J. Stewart, Australia ; and Leonard West, England—equal ; 79. F. H. Borthwick, Australia ; C. E. Duma-noire, Trinidad ; W. R. S. Watkins, Wales ; D. H. Wessels, So. Africa ; D. P. D. Wilkie, Kirriemuir ; and G. W. Young, London—equal ; 85. C. K. Coutts, Scotland ; W. H. Davison, Ireland ; D. E. Derry, England ; John Fortune, Fife ; L. Turiansky, Scot-land ; E. A. Turpin, Tobago ; and W. D. Wright, London—equal ; 92. A. Carruthers, Scotland ; R. W. D. Hewson, Cheshire ; J. A. Pottinger, Orkney ; F. G. Salceby, Palestine ; and A. C. T. Woodward, England—equal ; 97. M. Ashkenazie, Roumania ; A. Buchanan, Argyleshire ; J. B. Lockerbie, Edin-burgh ; and D. C. Welsh, Selkirk—equal ; 101. S. M. Livesey, England, and W. B. Wishart, Scotland—equal ; 103. A. W. Hogg, New Zealand, and A. N. J. Vizarat, Hyderabad—equal ; 105. W. Basson, So. Africa ; John Beyers, Cape Colony ; W. F. Brayne, England ; and Jas. Davidson, Berwick-on-Tweed—equal ; 109. M. Ashruff, India ; F. D. Crosthwaite, Scotland ; and John Kirk, Scotland—equal ; 112. T. C. Blackwell, Harrow-Weald ; R. W. Johnstone, Scotland ; F. T. C. Linton, Scotland ; W. Sibbald Robertson, Scotland ; and A. Simpson, Scotland—equal ; 117. A. S. L. Biggart, England ; R. B. Calwell, Ireland ; N. C. Forsyth, Mull ; H. M. Gillespie, Kirkgunzeon ; and H. L. Munro, Lincoln—equal.

E. A. SCHÄFER, LL.D., *Professor.*

#### PRACTICAL MATERIA MEDICA.

FIRST-CLASS HONOURS.—1. Cameron R. Gibson, Carlisle ; 2. Thomas Peebles, Edinburgh (*Medallists*) ; 3. Robert A. Chambers, Perth, and D. Duncan Paten, Scotland—equal ; 5. W. Cuthbert Morton, Trinidad ; 6. Gilbert J. Farie, Bridge of Allan ; 7. Alexander Gray, Scotland ; 8. Charles R. F. Hartley, England ; 9. William C. Burton, Guernsey, and George Gordon, Scotland—equal ; 11. Daniel Allison, Scotland ; James M. Kirkness, Scotland ; and George D. Sloan, London—equal.

SECOND-CLASS HONOURS.—14. Thomas T. Thomson, India, and Robert Veitch, Scotland—equal; 16. John Findlay, New Zealand; William Mackenzie, Scotland; and Philip W. Mason, New Zealand—equal; 19. Andrew A. Hall, Leith, and Alexander Lundie, Scotland—equal; 21. George W. Armstrong, Wales; William Sanderson, Tranent; and Henry Speirs, Berwickshire—equal; 24. George Cunningham, Scotland; 25. Farhat Ali, India; James Girdwood, Scotland; James A. Pottinger, Scotland; and John Tait, Orkney—equal; 29. John M. Dewar, Scotland; 30. Angus Buchanan, Scotland, and James Davidson, Scotland—equal; 32. C. Hawkins Craig, Scotland, and Clement E. Dumanoire, Trinidad—equal; 34. Ernest A. Turpin, Tobago; 35. John Allan, Scotland; Hugh S. Davidson, Scotland; John MacDonald, Ireland; and George Ritchie, Scotland—equal; 39. J. Dudgeon Giles, Edinburgh, and Garnet W. Harty, New Zealand—equal; 41. J. Allan Anderson, Scotland, and D. G. Addison-Scott, Arbroath—equal; 43. Fred. D. Crosthwaite, Scotland, and Walter M. Selby, Wigtownshire—equal; 45. Thomas C. Blackwell, Harrow-Weald; Robert W. Craig, Mid-Lothian; and Norman D. Mackay, Aberfeldy—equal; 48. Alec Carruthers, Scotland; Douglas E. Derry, England; and W. Sibbald Robertson, Scotland—equal.

Mr James A. Duggan was present at one examination, and obtained over 75 per cent.

THOMAS R. FRASER, M.D., *Professor.*

## PRACTICAL PATHOLOGY.

FIRST-CLASS HONOURS.—1. D. R. Macgregor, Dunfermline; 2. Frank L. Dawson, India, and T. B. Hamilton, Melrose—equal (*Medallists*); 4. T. F. Cavanagh, Ireland; Robert C. Low, Edinburgh, and W. E. Marshall, Perth—equal; 7. A. B. Ross, Ross-shire, and B. P. Watson, Largo—equal; 9. C. H. Bosenberg, Cape Town; John Dunlop, Lanark; C. J. Shaw, Perthshire; and S. A. K. Wilson, United States of America—equal; 13. William Lilico, Ireland; 14. S. A. Ellerbek, Denmark; Sidney Gilford, Surrey; John Haegert, India; and J. Scott Sewell, Northumberland—equal.

SECOND-CLASS HONOURS.—18. Edward A. Braine, Montrose, and Henry H. Roberts, London—equal; 20. W. F. Smeall, Jedburgh; 21. Arch. Brownlie, Fauldhouse, and Alex. W. M. Harvey, Nova Scotia—equal; 23. Theodore M. Cuthbert, British Honduras; 24. Harry Overy, England; 25. John W. Cathles, Edinburgh, and Henry Herd, Leith,—equal; 27. William Hume, Australia, and James Kirkwood, Edinburgh—equal; 29. D. M. Callender, Scotland, and Stewart A. Moore, New Zealand—equal; 31. John P. Grant, Broughty Ferry; R. C. Irvine, Tasmania;

William Newlands, New Zealand; and J. Martin Smith, Dundee—equal; 35. Wilbert Goodchild, Northumberland; 36. Alex. K. Baxter, Leith; and J. H. Montgomery, Ireland—equal; 38. James Arthur, Liverpool; R. Dods Brown, Edinburgh; and Philip Vickers, Jamaica—equal; 41. Thomas W. E. Ross, London; 42. James H. Connolly, Ireland; Henry Curwen, St Andrews; and D. J. Hammar, Cape Colony—equal; 45. John A. Gray, India; Isaac Ivey, India; Ronald S. Munro, Nantwich; and Robert E. Russell, Cape Colony—equal; 49. Saiduzzafar Khan, India; 50. E. L. Meynell, India; 51. John K. Matheson, Scotland; Thomas H. Osler, Cape Colony; and John Wier, Ireland—equal; 54. Paul Mathews, England; and R. P. McNeil, Stranraer—equal; 56. J. R. Bosman, Cape Colony, and Archibald Gillespie, St Andrews—equal.

Unavoidably absent from one examination.

SECOND-CLASS HONOURS—D. P. Goil, Meerut.

W. S. GREENFIELD, M.D., *Professor.*

## FORENSIC MEDICINE AND PUBLIC HEALTH.

(COMBINED COURSE.)

FIRST-CLASS HONOURS—1. P. J. Hay; 2. S. A. Ellerbels (*Medallists*); 3. D. R. MacGregor and Alexander M. Sharp, M.A.—equal.

SECOND-CLASS HONOURS.—5. E. A. Braine; 6. Robert C. Low and W. Newlands—equal; 8. S. C. Ellison; J. H. Montgomery and W. H. Winstanley—equal; 11. T. B. Hamilton, John K. Matheson, and Ben P. Watson—equal; 14. W. F. Smeall; 15. George A. Jolly; 16. W. F. Macdonald and Thos W. E. Ross—equal; 18. D. M. Callender, W. E. Marshall and R. J. Mayberry—equal; 21. William Goodchild and C. J. Shaw—equal; 23. H. Lovett Cumming and Isaac Ivey—equal; 25. A. Kidd Baxter, Sidney Gilford, D. J. Hamman, H. Astley Knight, J. Hally Meikle, Andrew B. Ross, M.A., Walter Swaffield, and John Wies—equal; 33. D. P. Goil, Henry Herd, A. H. Rabagliati and John Wallace—equal; 37. Harold Kerr, Wm. Lilico, and J. Scott Sewell—equal; 40. B. Blacklock, James H. Connolly, Shaik Dawood, John Dunlop, A. W. Montgomery Harvey, S. Walker Maclean, Charles Nelson, and Robert Ekler Russell—equal; 48. Henry Curwen, T. Gowans and John Politachi—equal; 51. G. B. Brand, Archibald Brownlie, A. M. Caverhill, J. P. Grant, John Haegert, James Kirkwood, James C. Loudon, John G. McCaughey, J. J. McMillan, Paul Mathews, Stuart A. Moore, J. Martin Smith, J. R. Tannahill, and J. F. de Villiers.

HENRY D. LITTLEJOHN, Kt., M.D., } *Professors.*  
C. HUNTER STEWART, M.B., D.Sc., }



# OPERATIVE MIDWIFERY AND GYNECOLOGY.

FIRST-CLASS HONOURS.—1. F. D. Simpson, Bathgate; 2. W. E. Frost, Ireland (*Medallists*); 3. Malcolm Campbell, Edinburgh; 4. A. A. Martin, New Zealand; 5. A. J. Baird, Scotland.

SECOND-CLASS HONOURS.—6. Shaik Dawood, India.

A. R. SIMPSON, M.D., *Professor*.

# MENTAL DISEASES.

FIRST-CLASS HONOURS.—1. R. T. Baillie; 2. Andrew C. Keay; 3. W. H. Prentice and G. Robertson Mill—equal (*Medallists*); 5. Ernest A. Walker; 6. W. E. Carnegie Dickson; 7. R. A. J. Harper; 8. Henry Buist; 9. John Fraser Orr; 10. George A. Davidson and Henry L. Spark—equal.

SECOND-CLASS HONOURS.—12. W. S. Patton; 13. William Lee; 14. C. H. Lindsay; 15. Roderick M. Grant, Andrew Hunter and W. MacDougall—equal; 18. James Halliday; 19. R. W. Buchanan; 20. J. H. Montgomerie Bell, Henry H. Roberts, and W. A. Robinson—equal; 23. G. S. Murray and J. G. M'Bride—equal; 25. J. Keith A. Robertson; 26. John M'Kenzie; 27. G. C. I. Robertson and Thomas A. Smyth—equal; 29. E. Elmslie Brown and R. V. Clark—equal; 31. R. A. Glegg and James Woods—equal; 33. James Brocket; 34. F. E. Wilson; 35. J. Price Kennedy and I. Struthers Stewart—equal; 37. J. M. Dupont; 38. Edwyn G. H. Mackenzie; 39. S. Lyle and Charles C. Choyce—equal; 41. James Brownlee.

T. S. CLOUSTON, M.D., *Lecturer*.

# DISEASES OF THE EYE.

FIRST-CLASS HONOURS.—1. G. C. J. Robertson; 2. W. Newlands; 3. George A. Davidson (*Medallists and Prizemen*); 4. R. T. Baillie and W. E. Carnegie Dickson—equal (*Medallists*); 6. R. Morison; 7. Andrew C. Keay, J. K. A. Robertson, and Ernest A. Walker—equal; 10. David Munro, W. H. Prentice, Abraham Ransome Wallis, and R. A. J. Harper—equal; 14. S. G. Peill, J. L. Duncan, and George R. Mill—equal; 17. J. Halliday; 18. James P. Kennedy; 19. A. L. Gurney, Stephen Garvin, A. K. Johnston, and J. Hally Meikle—equal; 23. John M'Kenzie; 24. A. E. Hunter and Henry L. Spark—equal; 26. Andrew Hunter, Aubrey T. Smyth, R. W. Buchanan, Fred. E. Wilson, and Arthur J. Brock—equal; 31. James Brocket, J. W. Falconer, and E. Elmslie Brown—equal; 34. R. Dods Brown, Ian Struthers Stewart, and W. G. Patton—equal; 35. W. A. Robinson; 36. C. W. Somerville; 37. J. G. M'Bride, W. Lee, Alex. Mouat, and H. P. Thomson—equal.

SECOND-CLASS CERTIFICATES.—41. J. L. Palmer, George A. Jolly,

## 488 *Faculty of Medicine—Class Prize and Honours Lists.*

and P. H. Mules—equal ; 44. Michael W. Robertson, W. A. Duncan, H. Dodgson, T. Lauder Thomson, and P. F. M'Farlan—equal ; 49. T. L. Rigby ; 50. K. D. C. Macrae and W. Speirs—equal ; 52. George C. Burgess ; 53. J. Woods ; 54. D. Sutherland, D. A. Stewart, J. R. Edwards, and G. Strathairn—equal ; 58. A. P. Coskey and R. T. Young—equal ; 60. J. B. Mason ; 61. Alexander Hunter, C. H. Lindsay, and H. M. Roberts—equal.

GEORGE A. BERRY, M.B., *Lecturer.*

### DISEASES OF THE LARYNX, EAR, AND NOSE.

FIRST-CLASS HONOURS.—1. Roderick M. Grant (*Prizeman*) ; 2. Arthur H. Reid.

SECOND-CLASS HONOURS.—3. R. Ashleigh Glegg ; 4. Charles W. Somerville.

P. M'BRIDE, M.D., *Lecturer.*

### TROPICAL DISEASES.

FIRST-CLASS HONOURS.—1. R. J. Bradley ; 2. Ernest Peill, M.B. ; 3. J. Hally Meikle, M.A., B.Sc. (*Medallists*) ; 4. C. W. Howie ; 5. G. L. Thomson ; 6. W. Miller ; 7. P. E. Leeb du Toit, M.B. ; 8. A. C. Masson ; 9. Norman E. Harding.

SECOND-CLASS HONOURS.—10. M. Brown ; 11. Shaik Dawood ; 12. D. C. Henry.

ANDREW DAVIDSON, M.D., F.R.C.P. Ed., *Lecturer.*

### DISEASES OF THE SKIN.

FIRST-CLASS HONOURS.—1. R. W. Buchanan (*Prizeman*) ; 2. W. F. Carnegie Dickson ; 3. J. G. M'Bride and John K. Matheson—equal.

SECOND-CLASS HONOURS.—5. W. Miller.

W. ALLAN JAMIESON, M.D., *Lecturer.*

## WINTER SESSION, 1900-1901.

### CHEMISTRY.

ROBERT WILSON MEMORIAL PRIZE.—James Watson, Edinburgh.

FIRST-CLASS HONOURS.—1. James Watson, Edinburgh ; 2. F. Ross, Coupar-Angus ; 3. R. Armstrong Wilson ; 4. James D. Fulton, Edinburgh ; W. G. Robertson, Edinburgh ; and James Young, Edinburgh—equal (*Medallists*) ; 7. John Dunbar, and Alexander D. Stewart, Blairgowrie—equal ; 9. John Anderson, Eskbank, and Robert S. Frew, Newfoundland—equal ; 11. George G. Johnston, and John Smith, Ayr—equal ; 13. Robert C. Wallace, Orkney ; 14. W. J. Maloney, and Arthur Ollivierre—equal ; 16. H. Brown, South Africa, and J. R. Holgate—equal ; 18. W. Torrance Smith,

Mid-Calder; 19. W. S. Millar; 20. Francis Aitken; 21. H. B. Watson, Milnathort; 22. George Durran, Caithness, and L. P. M. Gardner—equal; 24. Robert Baird, Edinburgh; Francis W. Cragg; J. E. Newlands; and Aloysius C. Pickering—equal; 28. Edward Blades; 29. Alexander T. Cameron, Wiltshire, and H. W. F. Wadd—equal; 31. Peter Connell and John D. Harmer—equal; 33. S. M'Naughton; A. MacTier Pirrie, Edinburgh; Archibald H. Robertson, Oban; and H. E. A. Washbourn, Nelson, N.Z.—equal.

SECOND-CLASS HONOURS.—37. W. L. Christie, Edinburgh; James C. Holm, and Fred. J. G. Tocher, Dumfries—equal; 40. David Clouston, Orkney; Joseph J. Coull, Montrose; Wm. Lumsden; T. S. M'Intosh, Alva; and James F. Mackay, Avonbridge—equal; 45. John Chisholm; C. E. Elliston; John L. Pirie; H. P. Bruce Tait; and J. H. MacLagan Wedderburn, Forfar—equal; 50. J. H. Rousseau; Eustace M. Simmers; and Basil H. Watt—equal; 53. William Anderson; W. M. P. Henderson; Fred. Smith, Cheshire; and R. B. Thomson, Edinburgh—equal; 57. Alexander Mathieson; 58. W. Geddie; Halliday G. Sutherland, Glasgow; and Peter White—equal; 61. Walter N. Bolam; David Dunn, Bathgate; J. F. James; and Hugh C. Wilson—equal; 65. William R. Durham, Thurso; John A. Harley; and Hugh Millar, Ayrshire—equal; 68. A. C. Alport; H. A. Edwards; William Gemmill, Kilmarnock; Francis Otto Inglis; and William M. Scott—equal; 73. T. Addis; Andrew J. Harpur, Strabane; A. K. R. Paton, Ayrshire; Donald Robertson, Edinburgh; W. J. Burns Selkirk, Aberdeen; and H. C. Weber—equal; 79. James G. Glen; 80. Thomas Campbell; James P. S. Jamieson, Shetland; P. N. Joannides; N. N. G. M'Vean; J. M. Ritchie; and Robert A. Spence—equal; 86. John Adamson; W. S. Cameron, Perth; John Lindsay; Hector B. Morris, Dunfermline; Harold E. Rawlence, England; Edward H. Smith, Edinburgh; and T. G. Young, Bathgate—equal; 93. L. F. Dawson, and S. Edgar Martin, Newry—equal; 95. T. Graham Brown; George C. Muirhead, Berwickshire; Oliver Smith, Lincoln; and James Sutherland—equal; 99. J. T. Dickson; J. Grimoldby; and Fred. D. Sime, Edinburgh—equal; 102. Thomas Davidson, and D. M. Mathieson—equal; 104. John Anderson, Caithness; J. H. Birrell; H. P. Cook; Geo. Gunn; Thomas Scoresby-Jackson; E. B. Munro, Calcutta; and Henry Sauzier—equal; 111. Norman Black, and Hubert J. Norman, Devonshire—equal; 113. M. J. Finnigan; Peter M'Dermid, Argyleshire; G. P. Norman; Arthur J. R. O'Brien, Cupar-Fife; H. D. Robb, Dumfries; Graham Robertson, Edinburgh; and F. P. Wernicke—equal; 120. William Carswell; George H. Howe, Ireland; R. Lloyd Jones; James A. Loughridge; J. Douglas M'Kelvie, Blofield; John S. Mitchell; and George Raffan—equal; 127. James

R. Kerr ; A. Lawson ; Donald M'Lean ; Thomas F. Main ; and David L. Morrison—equal ; 132. Herbert M. Cargin ; Frank Stuart Cumming ; and Archibald C. M'Master—equal ; 135. W. L. Johnston, Edinburgh, and R. Clive Walker—equal.

## PRACTICAL CHEMISTRY.

**FIRST-CLASS HONOURS.**—1. John Dunbar ; 2. W. J. Maloney and Alexander D. Stewart, Blairgowrie—equal ; 4. H. Brown, South Africa ; 5. F. Ross, Coupar-Angus (*Medallists*) ; 6. George G. Johnston, Malta ; 7. W. G. Robertson, Edinburgh, and John Smith, Ayr—equal ; 9. Duncan M. Barker ; 10. Francis Aitken, Dundee ; 11. Francis W. Cragg, Westmoreland ; 12. George Banks, West Linton ; Robert S. Frew ; and James Young, Edinburgh—equal ; 15. George Durran, and Hugh B. Watson, Milnathort—equal ; 17. Arthur Ollivierre, Trinidad ; 18. T. G. Young, Bathgate ; 19. John R. Holgate ; 20. Harold E. Rawlence, Salisbury ; 21. William Geddie, Edinburgh ; James C. Holm ; A. C. Pickering ; Eustace M. Simmers, Ramsgate ; and H. E. A. Washbourn, New Zealand—equal ; 26. James F. Mackay, Avonbridge, and S. Edgar Martin, Newry—equal ; 28. William S. Cameron, Perth ; W. L. Christie, Edinburgh ; William R. Durham, Thurso ; and R. B. Thomson—equal.

**SECOND-CLASS HONOURS.**—32. James G. Glen, Edinburgh, and Hugh C. Wilson—equal ; 34. L. P. M. Gardner ; A. J. Harpur, Ireland ; Alexander Mathieson ; and R. Clive Walker—equal ; 38. Fred. D. Sime, Edinburgh ; 39. N. N. G. M'Vean, and Hector B. Morris—equal ; 41. W. Gemmill ; J. C. Grieve, Dumfries ; A. MacTier Pirrie ; and J. H. Rousseau—equal ; 45. Joseph J. Coull and Oliver Smith, Lincoln—equal ; 47. Norman Black ; R. B. Mackinnon ; H. Millar, Ayrshire ; and G. P. Norman—equal ; 51. Robert Baird, Edinburgh, and K. W. Mackenzie—equal ; 53. J. T. Dickson ; Hugh A. Edwards, Motherwell ; James A. Loughridge ; H. Mowat ; and T. Scoresby-Jackson, London—equal ; 58. Stewart M'Naughton ; 59. John Anderson, Caithness ; James P. S. Jamieson, Shetland ; John L. Pirie ; John Redpath, Scotland ; and Fred J. G. Tocher, Dumfries—equal ; 64. John Chisholm, Inverness ; William Henderson ; T. S. M'Intosh ; Thomas F. Main ; and E. S. Munro—equal ; 69. N. C. Dutt ; W. L. Johnston, Edinburgh ; Arthur J. R. O'Brien, Cupar-Fife ; and William M. Scott—equal ; 73. William Anderson ; Graham Robertson, Edinburgh ; and Basil H. Watt—equal ; 76. Peter Connell ; Ronald R. Murray ; and W. Torrance Smith—equal ; 79. H. M. Cargin, and George Y. Richardson, Stirling—equal ; 81. A. C. M'Master, New Zealand, and Frank P. Wernicke—equal ; 83. H. P. Cook ; P. N. Joannides ; John Lindsay ; and W. M'Gowan—equal ; 87. R. H. Nolan ; 88. D. C. Crole, and

George Raffan—equal; 90. George S. Banks; 91. I. H. Cornelius Martin; John Finnigan; George H. Howe; P. M'Dermid; and James T. Young—equal; 96. George Blair; J. A. Cruickshank, Scotland; Frank Stuart Cumming; G. H. R. Gibson, Edinburgh; D. F. Mackenzie; and J. C. Meldrum—equal; 102. John S. Caldwell; L. F. Dawson; G. A. S. Hamilton; Alfred S. Hendrie; Joseph Ings, New Zealand; R. Lloyd Jones; James K. Kerr; and Thomas E. Roberts—equal; 110. Alexander S. Lawson; A. I. Miller; John S. Mitchell; A. G. van Someren; H. G. Sutherland; H. P. Bruce Tait; and William O. Welply—117. A. B. Darling, and D. W. Sibbald, New Zealand—equal.

ALEX. CRUM BROWN, M.D., *Professor.*

### ELEMENTARY ZOOLOGY.

FIRST-CLASS HONOURS.—1. John Smith, and 2. J. A. Gunn (*Medallists*); 3. H. E. A. Washbourn, and R. B. Young—equal; 5. T. Addistand, and J. Z. H. Rousseau—equal.

SECOND-CLASS HONOURS.—7. P. M'Dermid; 8. A. C. MacMaster; 9. H. L. Sutherland; and J. G. Tocher—equal; 11. J. P. S. Jamieson, and D. W. Sibbald—equal; 13. J. M. Dickson, and W. Lumsden—equal; 15. Wm. Anderson; 16. E. M. Simmers; 17. D. Robertson; 18. G. C. Muirhead; 19. J. S. Mitchell; 20. G. Hadden, and A. C. Pickering—equal; 22. G. Blair; 23. T. Scoresby-Jackson; 24. A. Ollivierre; 25. L. F. Dawson; H. C. Wilson; and J. Lindsay—equal.

Mr J. Randolph Davidson obtained Second-Class Honours with 68 per cent. on the First Examination, but was unavoidably absent from the Second.

### PRACTICAL ZOOLOGY.

FIRST-CLASS HONOURS.—1. A. C. MacMaster, and 2. T. Scoresby-Jackson (*Medallists*); 3. J. P. S. Jamieson; 4. R. E. Newman.

SECOND-CLASS HONOURS.—5. S. A. Smith; 6. D. C. Alexander; A. S. MacTavish; and A. C. Pickering—equal; 9. E. M. Simmers; 10. J. S. Caldwell; C. E. Elliston; G. Gunn; T. S. M'Intosh; and D. H. Paul—equal; 15. H. A. Edwards; 16. W. Lumsden; J. Morris; D. Robertson; and D. W. Sibbald—equal; 20. A. C. Alport; J. A. Gunn; J. S. Kinross; and H. G. Sutherland—equal.

J. C. EWART, M.D., *Professor.*

### PHYSICS.

FIRST-CLASS HONOURS.—1. James Young, Scotland; 2. Duncan M'F. Barker, Dumbartonshire, and Robert S. Frew, Newfoundland—equal; 4. Stewart M'Naughton, Edinburgh, and W. J. Maloney, Scotland—equal (*Medallists*); 6. L. P. M. Gardner, Edinburgh; 7. F. W. Cragg, Kendal, Westmoreland; 8. C. E. Elliston,

Ipswich, Suffolk, England; 9. Davidina R. J. Davidson, Camelon, Falkirk; and Wm. Henderson, Scotland—equal; 11. J. C. Holm, Scotland; 12. J. T. Dickson, England; 13. John Chisholm, Scotland.

SECOND-CLASS HONOURS.—14. W. T. Smith, Mid-Calder; 15. J. R. Holgate, England; A. J. R. O'Brien, Cupar, Fife; and Herbert Brown, South Africa—equal; 18. J. A. Loughridge, Coleraine, Ireland; 19. Jessie H. Gellatly, Edinburgh, and Ada H. Hatchard, Isle of Wight—equal; 21. J. R. Kerr, Edinburgh, and T. E. Robarts, Scotland—equal; 23. N. N. G. C. M'Vean, Scotland; 24. J. K. Eccles, England, and H. E. Rawlence, Salisbury—equal; 26. Graham Robertson, Edinburgh; W. M. Scott, Ruthwell; and R. C. Walker, Edinburgh—equal; 29. J. C. D. Allan, India; G. S. Banks, Wigtownshire; Elizabeth H. Brook, Edinburgh; M. J. Finnigan, Farnham; and Elsie B. Wilkie, Kirriemuir—equal; 34. Agnes E. Porter, and F. P. Wernicke, Darjeeling, India—equal; 36. J. C. Grieve, Dumfries; Alex. Mathieson, Falkirk; and L. D. Stephen, Edinburgh—equal; 39. Norman Black, Greenock; R. H. Nolan, Ireland, and W. O. Welply, Clonakilty, Co. Cork—equal; 42. H. F. Fenton, Hatfield, Yorkshire; and F. O. Inglis, Peebles—equal; 44. H. S. A. Hogg, Yarrow, Selkirkshire; 45. Agnes M. Cowan, Edinburgh; Thomas Fraser, Edinburgh; A. J. Harpur, Strathbane, Ireland; R. Wilkins, England; and 49. S. E. Martin, Newry, Ireland—equal; E. W. Vaughan, Ireland, and Andrew Wight, Jedburgh—equal; 52. H. C. Webber, Georgetown, B. Guiana; 53. H. B. Morris, Dunfermline; Harold Smith, Waddington, Lincoln; and R. J. Mackenzie, Stornoway—equal; 56. I. H. Cornelius, Maissoorie, India; 57. F. E. Field, British Guiana, and Nettie B. Turnbull, Ross-shire—equal; 59. A. S. Hendrie, Dumfries; W. M. Hewetson, England; and J. D. M'Kelvie, Crown, Norfolk—equal.

C. G. KNOTT, D.Sc., *Lecturer.*

# SENIOR PRACTICAL ANATOMY.

FIRST-CLASS HONOURS.—1. Andrew A. Hall, M.A., Leith, and James M. Kirkness, Edinburgh—equal; 3. C. R. Gibson, M.A., Carlisle (*Medallists*); 4. C. S. Crichton, Arbroath; Henry Spiers, Berwickshire; and John Tait, Orkney—equal; 7. D. E. Derry, England; J. M. Dewar, Kirriemuir; W. C. Morton, Trinidad; J. A. Pottinger, Orkney; and Robert Veitch, Edinburgh—equal; 12. J. A. Anderson, Edinburgh; F. L. Aitkinson; James Girdwood, Scotland; C. R. F. Hartley, England; William Maclaren, Arbroath; Ian M. Macrae, Scotland; J. Henderson-Smith, Scotland; E. A. Turpin, Tobago; and W. D. Wright, London—equal; 21. Daniel Allison, Scotland; James Davidson, Berwick-on-Tweed; C. R. P. Mitchell, Glasgow; and E. J. Taylor, Scot-



land—equal ; 25. D. Halliday Croom, Edinburgh ; Ivan C. Kerr, England ; J. M. Lovett, England ; N. D. Mackay, Aberfeldy ; William Mackenzie, Edinburgh ; D. D. Paton, Scotland ; and Thomas Peebles, Edinburgh—equal ; 32. Alex. Gray, Scotland ; J. W. Keay, Scotland ; Labbhu Ram, India ; and T. T. Thomson, India—equal ; 36. G. J. Fairie, Bridge of Allan ; P. W. Mason, New Zealand ; and William Readman, Yorkshire—equal ; 39. Arthur Dangerfield, Edinburgh ; J. B. M'Neil, Scotland ; and W. S. I. Robertson, Blair Athole—equal ; 42. T. P. Caverhill, Berwick-on-Tweed, and W. Sibbald Robertson, Berwickshire—equal ; 44. Angus Buchannan, Scotland ; Samuel Burns, Ayr ; Harry Caird, Leith ; G. M. Coughtrey, New Zealand ; Wm. Sanderson, Tranent ; G. H. Skinner, Scotland ; and Leonard West, England—equal ; 51. F. D. Crosthwaite, Edinburgh ; A. E. Hodgson, Redcar ; A. G. M. Middleton, Burma ; and G. S. Mackay, Scotland—equal ; 55. G. W. Armstrong, Wales ; H. S. Coghill, Edinburgh ; R. W. Craig, Mid-Lothian ; A. C. Geddes, London ; and A. Chad. T. Woodward, England—equal ; 60. John Allan, Partick, and F. E. Larkins, England—equal ; 62. F. S. Brennan, Ireland, and W. B. Cullen, Carlisle—equal ; 64. H. J. Stewart, Australia ; 65. C. F. A. Oberlander, Cape Colony.

SECOND-CLASS HONOURS.—66. Samuel Cunliffe, Lancaster ; 67. L. G. Bruce, Edinburgh ; 68. D. C. Welsh, Scotland.

## JUNIOR PRACTICAL ANATOMY.

FIRST-CLASS HONOURS.—1. F. T. Bowerbank, Penrith ; H. C. Gibson, Orkney ; A. W. Hogg, New Zealand ; and R. S. Enever-Todd, M.A., Musselburgh—equal (*Medallists*) ; 5. David Brown, Roxburghshire ; D. W. Boswell, Norfolk ; W. J. Fraser, Ceylon ; John Sattley, Dumfriesshire ; and W. A. Wilson-Smith, Scotland—equal ; 10. R. B. Barnettson, Edinburgh ; J. A. Duggan, Ireland ; T. B. Mouat, Haddington ; and D. P. D. Wilkie, Scotland—equal ; 14. James Craw, Berwickshire ; A. G. Couthe, Scotland ; H. M. Gillespie, Kirkcubright ; and H. R. MacIntyre, China—equal ; 18. J. H. W. Babington, Ireland ; Robert Buchanan, Edinburgh ; E. J. Elliot, Scotland ; Archibald Oliver, Edinburgh ; E. M. Simmers, England ; and H. A. Stewart, Scotland—equal ; 24. D. M. C. Church, Scotland, and W. H. Forsyth, Scotland—equal ; 26. Benjamin Baty, England ; A. R. Berrie, India ; A. S. L. Biggart, England ; William Grant, Arbroath ; P. A. Harry, Jamaica ; John Morris, North Wales ; S. A. M'Clintock, Ireland ; A. W. Neill, Scotland ; and H. M. Thompson, England—equal ; 35. R. J. Mackessack, Forres ; 36. R. A. Chapman, England, and D. S. Murray, Scotland—equal ; 38. K. A. Moody-Stuart, Scotland, and L. S. Milne, Scotland—equal ; 40. G. P. Norman, England ; 41. J. R. Bartholomew,

## 494 *Faculty of Medicine—Class Prize and Honours Lists.*

Linlithgowshire, and J. R. Hall, Northumberland—equal ; 43. G. T. Drummond, Scotland, and John Jardine, Penicuik—equal ; 45. H. M. Whittell, London ; 46. Joseph Douglas Wells, Chelmsford.

### LECTURES ON ANATOMY.

#### SENIOR STUDENTS.

FIRST-CLASS HONOURS.—1. John P. M'Gowan, M.A., Dumfries (*Medallist*) ; 2. John J. H. Ferguson, Cardiff.

#### STUDENTS OF THE FIRST YEAR.

FIRST-CLASS HONOURS.—1. H. E. A. Washbourn, New Zealand ; 2. William Gemmill, Scotland ; 3. J. D. Sinclair, Derby (*Medallists*) ; 4. J. P. S. Jamieson, Shetland, and D. G. Reid, Wigtown—equal ; 6. William Jarvis, Scotland ; 7. A. M'Tier Pirrie, Scotland ; 8. H. B. Morris, Dunfermline, and W. M. Scott, Ruthwell—equal ; 10. D. M'F. Barker, Scotland ; Herbert Brown, England ; Charles M'Neill, Scotland ; and James Young, Scotland—equal ; 14. H. E. Rawlence, Salisbury, and John Smith, Coylton, Ayr—equal ; 16. John Chisholm, Scotland ; 17. J. M. Dickson, Scotland, and Arthur Ollivierre, Trinidad—equal ; 19. Thomas Davidson, Dundee, and W. J. Maloney, Scotland—equal ; 21. F. W. Cragg, Kendal ; L. P. M. Gardner, Edinburgh ; E. B. Munro, Calcutta ; and F. J. G. Tocher, Scotland—equal ; 25. R. Clive Walker, Edinburgh ; 26. A. C. M'Master, New Zealand ; E. M. Simmers, England ; A. N. J. Vizarat, Hyderabad ; and B. H. Watt, Scotland—equal ; 30. F. T. Bowerbank, Penrith ; F. Otto Inglis, Peebles ; A. J. R. O'Brien, England ; T. E. Roberts, Scotland ; and W. Torrance Smith, Scotland—equal.

SECOND-CLASS HONOURS.—35. C. E. Elliston, England ; J. R. Hall, Northumberland ; J. C. Holm, Glosary ; J. Z. H. Rousseau, Cape Colony ; R. B. Thomson, Scotland ; G. H. Ussher, New Zealand ; and H. C. Wilson, Edinburgh—equal ; 42. Wm. Lumsden, England ; Alexander Mathieson, Falkirk ; and J. T. Young, Cape Colony—equal ; 45. Thomas Campbell, Scotland, and J. R. Holgate, England—equal ; 47. Francis Aitken, Scotland ; Thomas Fraser, Scotland ; W. M. Hewetson, England ; and H. P. Bruce Tait, Jamaica—equal ; 51. M. J. Finnigan, England ; H. S. A. Hogg, Selkirkshire ; and George Raffan, New South Wales—equal ; 54. William Anderson, Scotland ; D. L. Morrison, Scotland ; and Oliver Smith, Lincoln—equal ; 57. James Lindsay, Edinburgh, and J. A. Loughridge, Ireland—equal ; 59. A. J. Lewis, India, and R. R. Murray, India—equal ; 61. F. E. Field, British Guiana ; J. C. Grieve, Dumfries ; N. N. G. C. M'Vean, Scotland ; and D. W. Sibbald, New Zealand—equal ; 65. D. C. Crole, Scotland ; R. S. Frew, Newfoundland ; Willy Fröhlich, Switzerland ; N. J. W. Gavin, New Zealand ; J. R. Kerr, Edin-

burgh ; and Wm. Stenhouse, Scotland—equal ; 71. J. C. D. Allan, India ; A. Cecil Alport, Cape Colony ; L. F. Dawson, England ; J. S. Mitchell, Scotland ; G. P. Norman, England ; and W. E. Reynolds, Portugal—equal ; 77. H. A. Edwards, Motherwell ; A. S. Hendrie, Scotland ; J. F. James, England ; and R. A. Staig, Edinburgh—equal ; 81. S. C. Fernando, Negombo, Ceylon ; A. J. Miller, Ceylon ; H. J. Norman, England ; and R. C. Standring Smith, England—equal ; 85. Mirza M. S. Beg, India ; John Lindsay, England ; Graham Robertson, Edinburgh ; and H. G. Sutherland, Glasgow—equal ; 89. S. E. Martin, Ireland, and D. H. Paul, Scotland—equal ; 91. E. J. Black, Edinburgh ; H. M. Cargin, Ireland ; Ian R. MacLeod, Scotland ; Stewart M'Naughton, Stockton-on-Tees ; S. Alwyn Smith, England ; and Harry Stokes, India—equal ; 97. E. G. Deverell, Redruth, and Harold Mowat, Scotland—equal ; 99. Frank Cumming, Scotland ; V. R. Gorakshakar, India ; J. D. Harmer, Scotland ; Joseph Ings, New Zealand ; and Joseph Robinson, B.Sc., England—equal ; 104. George Blair, Scotland ; A. J. Harpur, Strabane ; R. E. U. Newman, Ireland ; J. O. Shircore, India ; and W. C. Whiteside, England—equal ; 109. E. A. Aylward, England ; J. W. Cairns, Scotland ; R. E. Moyes, Largs ; G. Y. Richardson, Scotland ; Thomas Scoresby-Jackson, England ; and T. H. Scott, Selkirk—equal ; 115. C. F. Bainbridge, England ; Norman Black, Greenock ; David Eakin, Ireland ; H. F. G. Hall, Ireland ; R. Lloyd Jones, Wales ; H. Vernon-Taylor, Nottingham ; and F. P. Wernicke, Darjeeling—equal ; 122. C. Napier Finn, New Zealand ; C. Maxwell Hall, Jamaica ; R. S. Orbell, New Zealand ; and Alex. Sandison, Edinburgh—equal ; 126. R. A. Blake, Cape Colony ; J. A. Cruickshank, Nairn ; James Dundas, Scotland ; John Gilmour, Scotland ; G. H. Howe, Ireland ; and W. L. Johnston, Scotland—equal.

Faiz Jung, Hyderabad, obtained Second-Class Honours in two examinations, but was unable through illness to attend the third examination.

The SENIOR "JOHN AITKEN CARLYLE" BURSARY in *Anatomy and Physiology* was awarded to:—

The JUNIOR "JOHN AITKEN CARLYLE" BURSARY in *Anatomy and Chemistry* was awarded to James Young, Scotland ; *proxime accessit*, John Smith, Ayr.

The MACKENZIE BURSARIES FOR PROFICIENCY IN DISSECTING were awarded to A. G. Coullie, Scotland, and W. A. Wilson-Smith, Scotland ; W. J. Fraser, Ceylon, and G. F. S. Landon, Brazil.

MEDALS FOR PROFICIENCY IN DISSECTING were awarded to D. W. Boswell, Norfolk, and H. M. Gillespie, Kirkgunzion.

SPECIAL CERTIFICATES FOR PROFICIENCY IN DISSECTING were awarded to Robert Donaldson, Musselburgh, and R. S. Enever-Todd, Edinburgh.

The following gentlemen acted as Prosectors to the Class :—

Daniel Allison, Lanark.

D. E. Derry, England.

John Lovett, Nottingham.

Wm. C. Morton, Trinidad.

Wm. MacLaren, Arbroath.

Thomas Peebles, Edinburgh.

DAVID HEPBURN, M.D., *Lecturer.*

WM. TURNER, K.C.B., M.B., *Professor.*

## PHYSIOLOGY.

### SENIOR DIVISION.

FIRST-CLASS HONOURS.—1. J. M. Kirkness, Edinburgh ; 2. H. S. Davidson, Scotland (*Medallists*) ; 3. J. A. Anderson, Edinburgh, and James Girdwood, Scotland—equal ; 5. W. Cuthbert Morton, Trinidad ; 6. R. A. Chambers, Perth ; 7. A. A. Hall, Leith ; 8. T. C. Blackwell, Harrow-Weald ; 9. J. M. Dewar, Kirriemuir ; 10. D. E. Derry, England ; 11. T. Peebles, Edinburgh.

SECOND-CLASS HONOURS.—12. Arthur Dangerfield, Scotland, and G. H. S. Milne, Tayport—equal ; 14. C. S. Crichton, Arbroath, and J. Henderson-Smith, Edinburgh—equal ; 16. D. G. Addison-Scott, Arbroath, and W. B. Cullen, Carlisle—equal ; 18. Alex. Lundie, Torryburn ; E. Muir, Scotland ; H. L. Munro, Doncaster ; and Thomas Nicol, Scotland—equal ; 22. J. M. Johnston, Dundee ; J. W. Keay, Scotland ; F. W. Lundie, Cape Colony ; and J. B. McNeill, Edinburgh—equal ; 26. R. Veitch, Edinburgh ; 27. J. Allan, Partick ; G. W. Armstrong, Wales ; Angus Buchanan, Argyleshire ; Labbhu Ram, India ; and N. C. Rutherford, Yorkshire—equal ; 32. J. H. Keay, Scotland ; I. C. Keir, England ; J. M. Lovett, England ; and J. A. Roux, Cape Colony equal ; 36. James Davidson, Berwick-on-Tweed ; A. C. Geddes, London ; and C. R. P. Mitchell, Glasgow—equal ; 39. S. W. Smith, Dundee ; 40. N. D. Mackay, Aberfeldy, and W. D. Wright, London—equal ; 42. F. H. Gibson, High Wycombe ; H. C. Gibson, Orkney ; and G. J. Wentzel, Cape Colony—equal ; 45. R. W. Johnstone, Edinburgh ; 46. G. J. Farie, Bridge of Allan ; 47. Alex. Gray, Scotland, and W. MacLaren, Arbroath—equal ; 49. C. R. F. Hartley, England ; A. E. Hodgson, Redcar ; F. T. C. Linton, Edinburgh ; T. H. Mackinnon, Duddingston ; and L. C. Robinson, Valetta—equal ; 54. D. H. Croom, Edinburgh, and L. Turiansky, Scotland—equal ; 56. C. H. Craig, Edinburgh, and Ian M. Macrae, Inverness-shire—equal ; 58. C. F. A. Oberlander, South Africa ; 59. Wm. Sanderson, Tranent ; 60. D. Allison, Scotland ; T. P. Caverhill, Berwick-on-Tweed ; G. S. Mackay, Aberfeldy ; W. S. Robertson, Berwickshire ; and J. H. D. Webster, Scotland—equal.

The following gentlemen were present at only two examinations:—  
L. A. H. Lack, 83 per cent. ; and John Fortune, 76 per cent.

JUNIOR DIVISION.

FIRST-CLASS HONOURS.—1. R. Balfour Barnetson, Edinburgh ; 2. James Lochhead, M.A., Earlston ; 3. James Craw, Berwickshire, and E. Henderson, Ayr—equal (*Medallists*) ; 5. A. C. Strain, Blairgowrie ; 6. G. D. Mathewson, Scotland ; 7. A. W. Madsen, Portobello, and J. A. Ross, Perth—equal ; 9. D. Brown, Roxburghshire ; 10. R. S. E. Todd, M.A., Musselburgh, and L. S. Milne, Montrose—equal ; 12. J. Donaldson, Dundee, and D. P. Marais, South Africa—equal ; 14. A. M. Dryden, Dumfries, and H. R. M'Intyre, China—equal ; 16. T. E. Coulson, Lincolnshire ; W. J. Fraser, Ceylon ; and T. B. Mouat, Haddington—equal ; 19. D. H. C. MacArthur, Wakefield ; S. A. M'Clintock, Londonderry ; and J. P. M'Gowan, Dumfriesshire—equal ; 22. H. M. Gillespie, Kirkcubbin ; A. Macrae, Kintyre ; and W. M. Munby, North Shields—equal ; 25. T. H. Easton, Wigtownshire, and J. J. H. Ferguson, Cardiff—equal ; 27. Archibald Oliver, Edinburgh ; 28. D. A. Wilson Smith, Berwickshire ; 29. D. I. Anderson, Kingston-on-Thames ; M. Cohen, Canada ; H. A. Stewart, Blair Atholl ; and W. H. Simpson, New Zealand—equal.

SECOND-CLASS HONOURS.—33. J. M. R. Flament, Trinidad ; John Kirk, Edinburgh ; J. M. Lauder, Scotland ; M. M. Mamourian, Smyrna ; K. A. Moody-Stuart, Scotland ; and J. D. Sinclair, Derby—equal ; 39. A. R. Berrie, India ; J. M. Graham, Edinburgh ; G. S. Landon, England ; R. J. M'Intosh, Dundee ; and C. D. O'Neal, Barbadoes—equal ; 44. R. Donaldson, Dalkeith, and J. H. H. Joubert, Cape Colony—equal ; 46. D. W. Boswell, Norfolk ; G. L. Brunton, Wales ; W. H. Forsyth, Scotland ; P. A. Harry, Jamaica ; John Saffley, Dumfriesshire ; and D. P. D. Wilkie, Kirriemuir—equal ; 52. C. D. Lochrane, Scotland ; 53. W. Jarvis, Edinburgh, and C. J. Smith, Scotland—equal ; 54. T. F. Campbell, Lancashire ; 55. A. S. L. Biggart, West Hartlepool ; 56. K. M. A. Inniss, Trinidad ; 57. W. P. Beattie, Glasgow ; L. H. Skene, Scotland ; and W. B. Wishart, Scotland—equal ; 60. W. Grant, Arbroath, and A. J. Lewis, India—equal ; 62. J. J. Jardine, Penicuik ; F. R. Sinton, Scotland ; and Patrick Steele, Edinburgh—equal ; 65. J. W. H. Babington, Ireland, and G. P. Joy, London—equal ; 67. A. G. Coullie, Scotland ; G. W. Harty, New Zealand ; and R. J. Mackessack M.A., Forres—equal ; 70. W. W. Greer, Queensland ; 71. J. M. Bevers, South Africa ; 72. W. L. Pritchard, Nottingham, and Thomas Wright, Ireland—equal ; 74. W. S. Murdoch-Brown, Edinburgh ; D. M. C. Church, Scotland ; J. H. Hume, Jedburgh ; T. Robertson, Scotland ; G. Stewart, Lasswade ; and H. M. Thompson, Yorkshire—equal ; 80. J. Macdonald, Ireland ; 81. F. T. Bowerbank, Pen-



rith; E. A. Elder, Edinburgh; V. R. Gorakshakar, India; J. B. Lockerbie, Edinburgh; A. D. M'Callum, England; A. O. P. Reynolds, Surrey; and F. A. Wille, South Africa—equal; 88. E. I. Elliot, Roxburghshire; L. Fourie, South Africa; M. A. Huk, India; and C. S. Ryles, India—equal; 92. J. A. Glover, Dumfries; M. M. Huk, India; and G. M'Call Smith, Scotland—equal; 95. E. A. Aylward, Croydon; Douglas Bell, Barrow-in-Furness; J. G. Craig, Scotland; James Mackenzie, Scotland; D. S. Murray, Edinburgh; W. J. Patterson, Ireland; and H. S. Reid, Scotland—equal.

The following gentlemen were present at only two examinations:—J. M. Darling, 83 per cent.; J. Robinson, 60 per cent.; and R. H. Watt, 58 per cent.

### CHEMICAL PHYSIOLOGY.

FIRST-CLASS HONOURS.—1. Cameron R. Gibson, Carlisle, and J. M. Kirkness, Edinburgh—equal (*Medallists*); 3. J. W. Keay, Scotland; 4. L. C. V. Hardwicke, Cornwall; 5. H. S. Davidson, Melrose; 6. R. Veitch, Scotland; 7. J. B. M'Neill, Scotland, and J. A. Ross, Perth—equal; 9. A. E. Hodgson, England; J. M. Johnston, Scotland; and J. A. Pottinger, Orkney—equal; 12. J. A. Anderson, Edinburgh; J. M. Darling, Edinburgh; D. G. Addison-Scott, Arbroath; and R. S. Enever Todd, M.A., Edinburgh—equal; 16. J. H. Kay, Scotland; H. C. Martin, Dunggannon; and T. T. Thomson, India—equal; 19. R. T. G. Aickin, New Zealand; James Davidson, Scotland; and N. C. Rutherford, England—equal; 22. W. H. Davison, Ireland, and C. M. Begg, New Zealand—equal; 24. F. T. C. Linton, Edinburgh; Wm. MacLaren, Arbroath; and J. H. Smith, Scotland—equal; 27. J. Donaldson, M.A., Scotland, and S. A. M'Clintock, Ireland—equal; 29. R. Buchanan, Edinburgh, and R. W. Johnstone, Scotland—equal; 31. Labbhu Ram, India; 32. F. L. Atkinson, England; F. H. Borthwick, Australia; L. G. Bruce, Edinburgh; J. A. Roux, Cape Colony; and W. R. S. Watkins, Wales—equal; 37. W. Sibbald Robertson, Berwickshire; 38. A. W. Beveridge, Scotland; J. M. Lovett, England; and E. J. Taylor, Scotland—equal; 41. C. R. F. Hartley, England, and Alex. Lundie, B.Sc., Torryburn—equal; 43. S. Burns, Ayr; G. L. Brunton, Wales; P. W. Mason, New Zealand; and L. Turiansky, Scotland—equal; 47. T. C. Blackwell, Harrow-Weald, and F. E. Larkins, England—equal; 49. P. Gosnold, Bristol, and H. J. Stewart, Australia—equal; 51. T. P. Caverhill, Berwick-on-Tweed; C. E. Dumanoire, Trinidad; M. M. Huk, Hyderabad; and A. N. J. Vizarat, Hyderabad—equal; 55. C. R. P. Mitchell, Glasgow; 56. H. L. Munro, England; 57. C. S. Crichton, Arbroath; James Girdwood, Scotland; and S. W. S. Leery, Ireland—equal; 60. G. S. M'Kay,



Scotland ; 61. A. P. Wall, New South Wales ; 62. James Brennan, Ireland ; G. M. Coughtry, New Zealand ; J. Findlay, New Zealand, and R. M. M. White, England—equal.

SECOND-CLASS HONOURS.—66. M. C. Cowper, Mid-Lothian ; 67. J. P. du Toit, Kimberley ; 68. R. A. Chambers, Perth, and C. H. Muller, South Africa—equal ; 70. J. G. Craig, Scotland ; D. M. Newton, Scotland ; and R. W. Telford, New South Wales—equal ; 73. Ernest Muir, Scotland ; 74. Arthur Langerfield, Edinburgh ; 75. A. C. Devereux, England, and J. D. Giles, Scotland—equal ; 77. G. S. Clark, Scotland, and J. A. Mathers, Scotland—equal ; 79. W. B. Cullen, Carlisle, and S. W. Smith, Dundee—equal ; 81. C. D. Lochrane, Scotland ; F. W. Lundie, Cape Colony ; and F. R. Sinton, Scotland—equal ; 84. Alex. Gray, Scotland ; F. G. Saleeby, Palestine ; and W. D. Wright, London—equal ; 87. M. A. Huk, India, and W. S. J. Robertson, Blair Atholl—equal ; 89. C. H. Craig, Scotland ; J. R. Dobbin, Ireland ; O. M. Myrlees, Scotland, and C. E. S. Mitchell, Scotland—equal ; 93. C. W. Lewis, B.A., Cape Colony ; A. G. M. Middleton, Burmah ; and L. West, England—equal ; 96. H. S. Coghill, Edinburgh, and S. M. Livesey, England—equal ; 98. G. W. Harty, New Zealand, and G. D. Mathewson, Scotland—equal ; 100. W. H. Robertson, Argyleshire, and W. H. Simpson, New Zealand—equal ; 102. F. S. B. Fletcher, England ; 103. A. B. Spence, Scotland ; 104. A. A. Jardine, England ; 105. H. Ferguson, Ireland ; 106. W. Basson, South Africa ; H. C. Gibson, Orkney ; V. R. Gorakshakar, India, and J. Mackenzie—equal.

#### EXPERIMENTAL PHYSIOLOGY.

FIRST-CLASS HONOURS.—1. R. Balfour Barnetson, Edinburgh ; 2. S. A. McClintock, Ireland (*Medallists*) ; 3. John Sattley, Dumfriesshire ; 4. Alex. MacRae, Scotland ; 5. John Kirk, Scotland, and D. P. Marais, South Africa—equal ; 7. C. R. Gibson, Carlisle ; 8. T. H. Easton, Scotland ; 9. J. D. Sinclair, Derby ; 10. W. A. Wilson Smith, Scotland ; 11. W. D. Wright, London ; 12. J. W. Keay, Scotland ; 13. J. P. M'Gowan, Dumfries ; 14. Wm. Stenhouse, Edinburgh ; 15. S. Burns, Ayr ; 16. J. A. Anderson, Edinburgh, and W. B. Cullen, Carlisle—equal ; 18. D. Brown, Roxburghshire ; G. S. Landon, Brazil ; G. D. Mathewson, Scotland ; and A. Oliver, Edinburgh—equal ; 22. A. W. Neill, Scotland, and J. D. Wells, Chelmsford—equal ; 24. F. T. Bowerbank, Penrith, and A. W. Hogg, New Zealand—equal ; 26. G. W. Harty, New Zealand ; 27. Murray Cohen, Canada ; J. G. Craig, Scotland ; A. C. Devereux, England ; and A. J. Lewis—equal.

SECOND-CLASS HONOURS.—31. J. M. R. Flament, Trinidad, and W. B. Wishart, Scotland—equal ; 33. R. A. Chapman, England ; F. J. Luck, Edinburgh, and G. Ormrod, Cumberland—equal ; 36. J. G. Hume, Kirkcudbright ; 37. R. H. Watt, Scotland ; 38.

R. A. Chambers, Scotland; J. T. Gunn, Scotland; W. M. Munby, England; and W. H. Simpson, New Zealand—equal; 42. J. B. M'Kenzie, London, and J. H. D. Webster, Scotland—equal; 44. Jas. Craw, Berwickshire; Alex. Gray, Scotland; and T. B. Mouat, Haddington—equal; 47. J. H. Hume, Jedburgh, and J. B. M'Neill, Scotland—equal; 49. A. G. Coullie, Scotland; H. V. Goldstein, New Zealand; C. R. P. Mitchell, Glasgow; and G. H. Ussher, New Zealand—equal; 53. Douglas Bell, Barrow-in-Furness; W. J. Fraser, Ceylon; and James Lochhead, M.A., Earlston—equal; 56. E. A. Aylward, England; A. S. L. Biggart, England; A. Dangerfield, Edinburgh; H. R. Macintyre, China; and R. S. Enever Todd, M.A., Edinburgh—equal; 61. D. W. Boswell, Norfolk; R. Donaldson, M.A., Dalkeith; H. M. Gillespie, Kirkcubright; and K. A. Moody-Stuart, Scotland—equal; 65. C. M. Begg, New Zealand; 66. G. T. Drummond, Scotland; Jas. Girdwood, Scotland; J. M. Lovett, England; Wm. MacLaren, Arbroath; L. S. Milne, Montrose; D. M. Newton, Scotland; J. A. Ross, Perth; and A. N. J. Vizarat, Hyderabad—equal; 74. H. P. Milligan, Birkenhead; 75. W. H. Forsyth, Scotland; 76. V. T. Carruthers, India; P. A. Harry, Jamaica; and A. C. Strain, Scotland—equal; 79. J. W. H. Babington, Ireland, and J. B. Lockerbie, Scotland—equal; 81. A. R. Berrie, India, and Labbhu Ram, India—equal; 83. A. M. Dryden, Scotland, and A. O. P. Reynolds, Surrey—equal; 85. D. I. Anderson, Kingston-on-Thames; D. M. C. Church, Scotland; A. B. Cox; and N. C. Rutherford—equal; 89. N. D. Mackay, Aberfeldy; 90. John Grieve, Edinburgh; 91. T. E. Coulson, Lincolnshire; S. E. Douglas, Bournemouth; and H. M. Thompson, England—equal.

E. A. SCHÄFER, LL.D., *Professor*.

## MATERIA MEDICA.

FIRST-CLASS HONOURS.—1. Andrew A. Hall, M.A., Leith; 2. Cameron R. Gibson, Carlisle; 3. Lewis A. H. Lack, Trinidad; 4. James M. Kirkness, Edinburgh (*Medallists*); 5. J. Allan Anderson, Edinburgh; 6. Robert W. Johnstone, Scotland; Ernest Muir, Scotland; James Ross, Perth, and J. Andrew Roux, Cape Colony—equal; 10. Robert A. Chambers, Scotland; Arthur M. Dryden, Scotland; John Fortune, Cowdenbeath; and John Kay, Scotland—equal.

SECOND-CLASS HONOURS.—14. Graham Skinner, Scotland; 15. Philip Mason, New Zealand; D. M'Kenzie, Newton, Scotland; Henry Spiers, Berwickshire; and Thomas T. Thompson, India—equal; 19. Hugh S. Davidson, Scotland, and William Morton, Trinidad—equal; 21. C. R. F. Hartley, England; Algernon F. Hughes, Grenada; William MacLaren, Arbroath; and Hugh L. Munro, England—equal; 25. Charles M. Begg, New Zealand; J. M.

Dewar, Kirriemuir; and Robert Veitch, Scotland—equal; 28. Gilbert Farie, Bridge of Allan; Alexander Lundie, Fife; D. Duncan Paton, Scotland; and Ewen J. Taylor, Scotland—equal; 32. Arthur Dangerfield, Edinburgh; W. H. Davison, Ireland; John Findlay, New Zealand; Alexander Gray, Scotland; Ronald Henderson, Queensland; Thomas Peebles, Edinburgh; and Labbhu Ram, India—equal; 39. John Allan Partick; James Davidson, Berwick-on-Tweed; James Donaldson, Dundee; James Girdwood, Scotland; and Gordon S. Mackay, Scotland—equal; 44. Harry Caird, Leith; Arthur C. Devereux, England; W. Readman, England; John Tait, Orkney; and W. D. Wright, London—equal; 49. Crawford S. Crichton, Arbroath; Ernest Turpin, Tobago; and Gerald W. Young, London—equal; 52. Alexander Beveridge, Scotland; I. C. Keir, England; George Milin, Tayport; J. A. Pottinger, Orkney; and Louis Turiansky, Scotland—equal; 57. S. Burns, Ayr; John M. Johnstone, Scotland; and W. R. Watkins, Wales—equal; 60. Thomas Blackwell, Harrow-Weald; C. Hawkins Craig, Scotland; and George J. Wentzel, Cape Colony—equal; 63. David Allison, Scotland; 64. John M. Lovett, England; 65. W. B. Cullen, Carlisle; and G. Staunton Husband, Jamaica—equal; 67. Thomas P. Caverhill, Berwick-on-Tweed; Robert W. Craig, Mid-Lothian; J. Dudgeon Giles, Scotland; William S. Robertson, Berwick-on-Tweed; and D. J. Addison Scott, Arbroath—equal; 72. William Mackenzie, Edinburgh; Henry Martin, Dungannon; and Norman C. Rutherford, England—equal; 75. Ronald Aickin, New Zealand; A. C. Geddes, London; L. C. V. Hardwicke, Cornwall; Fred. T. Linton, Scotland; and Ian M. Macrae, Scotland—equal; 80. George Armstrong, Wales; Robert Buchanan, Edinburgh; J. W. Keay, Scotland; Charles H. Muller, South Africa; and J. Easton Scott, England—equal; 85. Angus Buchanan, Scotland; Mahomet Huk, India; and R. Manwaring-White, England—equal; 88. Clement E. Dumanoire, Trinidad; Alexander Glass, Scotland; Francis Lundie, Cape Colony; and C. F. A. Oberländer, Cape Colony—equal; 92. W. J. Basson, South Africa; 93. C. R. P. Mitchell, Scotland; F. G. Saleeby, Palestine; and William Sanderson, Tranent—equal; 96. Walter H. Pritchard, England.

The following gentlemen were unavoidably absent from one examination, and obtained an average of over 50 per cent. in the other two:—John M. Darling, Edinburgh; A. E. Hodgson, England; Norman, D. Mackay, Aberfeldy; Leslie C. Robinson, Calcutta; and R. Milne Walker, Scotland.

THOMAS R. FRASER, M.D., *Professor.*

#### PATHOLOGY.

FIRST-CLASS HONOURS.—1. T. B. Hamilton, Melrose; 2. Robert C. Low, Edinburgh; 3. David R. Macgregor, Dunfermline; 4. C. H.

Bosenberg, Cape Town (*Medallists*); 5. Henry J. Dunbar, Dunfermline; 6. Frank I. Dawson, India, and William Lilico, Ireland—equal; 8. T. M. Cuthbert, British Honduras; Paul Mathews, Carlisle; Chas J. Shaw, Scotland; and Ben. P. Watson, Fifeshire—equal; 12. Edward A. Braine, Montrose; 13. A. W. Montgomery Harvey, Nova Scotia; 14. S. A. Ellerbek, Denmark; S. C. Ellison, Ireland; Sidney Gilford, Surrey; Dirk J. Hamman, Cape Colony; and Stuart A. Moore, New Zealand—equal.

SECOND-CLASS HONOURS.—19. J. Dommissie, Cape Colony, and T. W. E. Ross, London—equal; 21. James Kirkwood, Edinburgh, and Henry H. Roberts, London—equal; 23. Matthew Holmes, New Zealand; 24. James H. Connolly, Ireland; J. P. Grant, Scotland; and W. E. Marshall, Perth—equal; 27. J. H. Harvey Pirie, Scotland; 28. John K. Matheson, Dingwall; W. Newlands, New Zealand; J. Scott, Sewell, England; and Alex. M. Sharp, M.A., Galashiels—equal; 32. R. E. Collins, B.A., India, and J. H. Montgomery, Ireland;—equal; 34. John Wier, Ireland; 35. D. P. Gail, India; Henry Herd, M.A., Leith; Alex. W. Hauman, Cape Colony; Harry Overy, England; and S. A. K. Wilson, United States—equal; 40. H. Lovett Cumming, Grangemouth; James S. E. Elliott, New Zealand; and A. N. Fell, New Zealand—equal; 43. W. Hume, Australia; James C. London, Trinidad; and S. Walker-Maclean, Ireland—equal; 46. D. M. Callender, M.A., Scotland; and W. F. Smeall, Jedburgh—equal; 48. J. R. Bosman, B.A., Cape Colony; W. C. Burton, Guernsey; H. Harding, Liverpool; J. Politachi, England; Herdman Porter, Ireland; and J. Martin Smith, Dundee—equal; 54. G. B. Brand, Bathgate; Arch. Browlie, Fauldhouse; John Haegert, India; Thos. H. Osler, Cape Colony; and Philip Vickers, Jamaica—equal; 59. J. M. Johnstone, Scotland; 60. B. Blacklock, Scotland; R. Dods Brown, Edinburgh; C. M. Campbell, Edinburgh; John Dunlop, Lanark; and R. P. M'Neil, Stranraer—equal; 65. H. Curwen, St Andrews, and A. E. Morton, India—equal; 67. J. C. Gordon Carmichael, Calcutta; R. C. Irvine, Tasmania; and J. G. M'Caughey, Ireland—equal; 70. Duncan Lorimer, Edinburgh; Philip H. Mules, New Zealand; Charles Nelson, Scotland; and H. M. Stumbles, Essex—equal; 74. Harold Kerr, Edinburgh; W. F. MacDonald, Inverness; A. B. dos Remedios, Goa; and E. S. Sharpe, Ireland—equal; 78. G. G. Buchanan, Kirriemuir; E. L. Meynell, India; Ronald S. Munro, Nantwich; and A. B. M. Thomsan, Scotland—equal; 82. W. Goodchild, England; A. O. Hooper, Burton-on-Trent; H. Astley Knight, Dublin; and Robert E. Russell, Cape Town—equal; 86. Lewis Anderson, Jamaica; R. G. Archibald, India; J. Fairbairn, British Guiana; George Harrison, England; V. Langmore, New South Wales; A. W. B. Loudon, Rosslyn; R. J. Mayberry, Ireland; D. N. W. Murray, New Zealand; A. H. Rabagliati, England; J. A. Rau-

benheimer, Cape Colony ; and J. F. de Villiers, Cape Colony—equal.

Absent from one Examination on account of illness :—First-Class Honours.—Andrew B. Ross, Scotland.

Second-Class Honours.—A. F. R. Conder, Edinburgh ; Percy El. Karey, Syria ; and Elbert Steyn, Cape Colony.

## PRACTICAL PATHOLOGY.

FIRST-CLASS HONOURS.—1. H. M. Stumbles, Essex.

SECOND-CLASS HONOURS.—2. J. C. Gordon Carmichael, India ; 3. J. G. Briggs, India ; 4. D. Lorimer, Edinburgh ; 5. W. Stuart Milne, India ; 6. W. Young, Airdrie ; 7. George Harrison, Edinburgh ; and W. J. D. Robertson, Greenock—equal.

Absent from one Examination :—Second-Class Honours.—C. H. Houghton, Edinburgh ; R. D. Kidd, Natal ; and D. N. W. Murray, New Zealand.

W. S. GREENFIELD, M.D., *Professor.*

## MEDICINE.

### SENIOR DIVISION.

FIRST-CLASS HONOURS.—1. J. Brownlee, Scotland ; 2. W. E. C. Dickson, Scotland ; 3. G. A. Davidson, Scotland ; and J. H. Meikle, Scotland—equal (*Medallists*) ; 5. J. Halliday, Scotland, and A. R. Johnston, Scotland—equal ; 7. G. A. Jolly, Scotland ; 8. J. G. M'Bride, Edinburgh, and T. B. Shaw, Ireland—equal ; 10. P. Murray, Scotland, and A. Malcolmson, Leith—equal ; 12. H. M. Roberts, Wales ; 13. H. M. Traquair, Scotland ; 14. W. J. Crow, Scotland ; S. Garvin, Ireland ; A. Mowat, Scotland ; W. Millar, Edinburgh ; and W. H. Prentice, Scotland—equal ; 19. R. V. Clark, Scotland ; O. J. Evans, Wales ; R. M. Grant, Inverness ; and G. Periera, Trinidad—equal ; 23. W. I. Dunn, Scotland ; J. W. Falconer, Scotland ; R. Hamilton, England ; and A. R. Wallis, England—equal ; 27. G. B. Dodds, Paris ; 28. D. M. Aitken, Singapore ; H. Buist, Dundee ; J. R. Edward, Scotland ; A. B. Flett, Edinburgh ; J. C. Gilchrist, Scotland ; P. J. Hay, England ; R. A. J. Harper, Scotland ; G. S. Murray, Bolton ; F. L. Rigby, England ; J. F. Orr, Scotland ; D. A. Stewart, London ; and J. Morrison, Ireland—equal.

SECOND-CLASS HONOURS.—40. D. Young, Elgin, and G. M'Farland, New Zealand—equal ; 42. F. E. Wilson, Scotland ; W. Brown, Scotland ; J. A. Smail, Scotland ; and L. M. Pole, Scotland ;—equal ; 46. M. N. Bose, India, and H. K. Macdonald, Scotland—equal ; 48. J. Jamieson, Scotland ; S. Lyle, Ireland ; I. Stewart, Scotland ; and G. D. Saner, England—equal ; 52. A. E. Hunter, Scotland ; E. W. Lewis, India ; R. Murray, Scotland ; L. A. MacMunn, Scotland ; M. W. Robertson, Scotland ; and C. S.



Steavenson, England—equal ; 58. K. Chapel, Scotland ; W. Eggeling, Scotland ; A. K. Lauddie, India ; J. Miskelly, Ireland ; W. Paterson, Scotland ; H. J. Pesel, England ; and W. Swaffield, England—equal ; 65. R. Morison, India, and J. K. A. Robertson, Scotland—equal ; 67. J. F. Allan, Scotland ; J. W. Barrack, Scotland ; A. W. S. Christie, Scotland ; and T. L. Thomson, Edinburgh—equal ; 71. W. A. Duncan, Scotland ; S. Dawood, India ; E. Jones, Wales ; W. Murray, Scotland ; and H. E. Wareham, England—equal ; 76. W. H. Meyer, British Guiana, and R. T. Young, Scotland—equal ; 78. W. M'Lachlan, Scotland ; J. H. Paterson, Ceylon ; and S. C. Roy, Calcutta—equal ; 81. C. Douglas, Scotland ; A. L. Roxburgh, Ayrshire ; and L. A. Holcroft, England—equal ; 84. H. Dodgson, England, and M. Johnston, Uruguay—equal ; 86. E. Macmillan, Scotland ; T. Mill, New Zealand ; J. H. C. Orr, Scotland ; J. Wallace, Scotland ; and P. V. Langmore, New South Wales—equal ; 91. C. Rutherford, Scotland ; 92. A. M'Ewan, Scotland ; 93. E. J. Porteous, Scotland ; 94. W. Landsborough, Scotland.

Present at two Examinations:—V. C. de Boinville, England (First-Class Honours) ; P. Pattison, Scotland (Second-Class Honours).

#### JUNIOR DIVISION.

FIRST-CLASS HONOURS.—1. S. A. Ellerbek, Denmark ; 2. C. H. Bösenberg, Cape Town ; 3. A. H. M'Shine, Trinidad ; and H. H. Roberts, England—equal (*Medallists*) ; 5. A. Brownlee, Scotland, and W. Newlands, New Zealand—equal ; 7. J. H. Montgomery, Ireland ; 8. J. Kirkwood, Edinburgh ; 9. S. Gilford, England, and A. B. Ross, M.A., Scotland—equal ; 11. H. Herd, Leith ; 12. D. M. Callender, M.A., Scotland ; W. E. Marshall, Scotland ; P. Mules, New Zealand, and C. J. Shaw, Scotland—equal ; 16. R. E. Collins, India ; A. N. Fell, New Zealand ; J. P. Grant, Scotland ; D. R. M'Gregor, Scotland ; T. W. E. Ross, London ; and A. Rabagliati, England—equal ; 22. E. A. Braine, Montrose ; J. Fairbairn and A. M. Sharp, M.A., Galashiels—equal ; 25. B. P. Watson, Scotland ; 26. R. D. Brown, Edinburgh ; C. M. Campbell, Scotland ; F. I. Dawson, India ; J. Haegert, India ; S. A. Moore, New Zealand ; and R. P. M'Neil, Stranraer—equal ; 32. T. B. Hamilton, Scotland ; W. Lilico, Ireland ; H. M. Stumbles, England ; J. M. Smith, and S. A. K. Wilson, U.S.A.—equal.

SECOND-CLASS HONOURS.—37. J. F. Duncan, New Zealand, and T. Johnstone, Scotland—equal ; 39. J. G. Loudon, Trinidad ; 40. J. M. Johnstone, Scotland ; H. Kramer, Germany ; W. Macdonald, Scotland ; T. H. Osler, Cape Colony ; and W. F. Smeall, Scotland—equal ; 45. G. S. Carey, Calcutta ; A. W. Haumann, Cape Colony ; A. E. Morton, India ; H. Hume, Australia ; E. Smyth, Victoria ; G. G. Buchanan, and J. S. Sewell, England—



equal ; 52. T. M. Cuthbert, British Honduras ; H. L. Cumming, Scotland ; and H. J. Dunbar, Scotland—equal ; 55. J. W. Cathles, Scotland ; G. Harrison, England ; D. J. Hauman, Cape Colony ; H. A. Knight, Dublin ; R. C. Low, Scotland ; and A. B. dos Remedios, Goa—equal ; 61. J. A. Scobie, Scotland ; A. Gillespie, Scotland ; J. A. Gray, India ; J. Hunter, Musselburgh ; and W. M. Selby, Scotland—equal ; 66. T. Gowans, England, and P. Vickers, Jamaica—equal ; 68. W. C. Burton, Guernsey ; R. E. Russell, Cape Town ; A. B. M. Thomson, Scotland ; and J. Raubenheimer, Cape Colony—equal ; 72. J. Dunlop, Lanark ; W. Goodchild, England ; and W. Young, Scotland—equal ; 75. J. S. Elliott, New Zealand ; W. H. Gush, England ; A. B. Leakey, England ; and R. G. Gordon, Chili—equal ; 79. A. O. Hooper, England ; G. C. Trotter, Scotland ; G. Wight, Scotland ; D. Mackinnon, Scotland ; and G. B. Brand, Scotland—equal ; 84. J. Arthur, England ; J. G. Briggs, India ; E. E. Cassaday, Scotland ; D. P. Goil, India ; J. B. Mason, Scotland ; J. G. McCaughey, Ireland ; and F. Ali, India—equal ; 91. J. Politachi, England ; W. B. Tannahill, Scotland ; and J. Weir, Ireland—equal ; 94. M. Ashruff, India ; J. R. Bosman, Cape Colony ; B. Blacklock, Scotland ; A. F. R. Conder, Scotland ; G. Henderson, Scotland ; R. S. Munro, England ; E. Steyn, Cape Colony ; and J. F. de Villiers, Cape Colony—equal ; 102. W. A. Cowan, Scotland ; J. Dommissee, Cape Colony ; J. P. Inglis, Berwick ; R. C. Irvine, Tasmania ; V. Langmore, Australia ; and J. J. Redhead, Venezuela—equal ; 108. A. K. Baxter, Leith ; W. Blackwood, Scotland ; M. Holmes, Scotland ; P. Hallam ; W. E. Knight, Dublin ; A. M. Moll, O.F. State ; E. S. Sharpe, Ireland ; and G. D. Sloan, London—equal ; 116. J. J. McMillan, Scotland, and E. E. Wood, Cape Colony—equal ; 118. W. A. Brown, Scotland ; H. H. Bullmore, Queensland ; M. Davies, Wales ; and W. Woodburn, Australia—equal ; 122. R. G. Archibald, India ; G. A. Davies, Wolverhampton ; A. P. R. Fennell, Cape Colony ; H. Porter, Ireland ; and C. M. Gillespie, Ireland—equal ; 127. A. Hutley, England ; S. W. Maclean, Ireland ; and A. J. Rowan, Cape Colony—equal ; 130. K. M. Liddell, England ; 131. J. C. G. Carmichael, India ; S. Cunliffe, England ; and A. M. Gloag, Scotland—equal ; 134. E. J. Morton, Scotland.

Present at two Examinations—D. N. W. Murray, New Zealand (First-Class Honours). J. WYLLIE, M.D., *Professor*.

## MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

FIRST-CLASS HONOURS.—1. W. H. Prentice, M.A., Scotland ; 2. W. E. Carnegie Dickson, B.Sc., Scotland ; 3. Peter Murray, Scotland ; and Alex. M. Sharp, M.A., Galashiels—equal

(*Medallists*); 5. J. Hally Meikle, M.A., B.Sc., Scotland; 6. George C. Burgess, Aberdeen; James Halliday, Scotland; G. Robertson Mill, England; and C. W. Saleeby, England—equal; 10. T. B. Shaw, Ireland; 11. William Lee, England; John M'Kenzie, Scotland; and David Young, Elgin—equal; 14. Edward Elmslie Brown, Scotland; H. Buist, Dundee; Chas. C. Choyce, New Zealand; and D. C. Henry, Scotland—equal; 18. R. T. Baillie, Scotland; G. M'Farland, New Zealand; Patrick F. M'Farlan, Dumfriesshire; J. G. M'Bride, Edinburgh; Andrew B. Ross, M.A., Scotland; and James Woods, Belfast—equal; 24. R. A. J. Harper, Mid-Lothian; 25. H. M. Traquair, Edinburgh, and Ben. P. Watson, Scotland—equal; 27. E. M. Glanville, Scotland; R. M. Grant, Inverness; John B. M'Cutcheon, Ireland; and G. C. Irvine Robertson, Scotland—equal; 31. A. R. Hallam, England, and A. Ransome Wallis, England—equal; 33. A. W. Stark Christie, Scotland; G. A. Davidson, Scotland; Shaik Dawood, India; A. R. Johnston, Scotland; Alexander Mowat, Scotland; and W. S. Patton, India—equal.

SECOND-CLASS HONOURS.—39. R. J. Bradley, India; J. Fraser Orr, Scotland; and J. K. A. Robertson, Scotland—equal; 42. C. M. Anderson, Ireland; James Brocket, Lanarkshire; F. A. Clarke, England; R. Hamilton, England; Wm. Hamilton, Ireland; R. C. Low, Scotland; David R. MacGregor, Dunfermline; J. Scott Sewell, England; W. H. Swaffield, England; and T. S. Beauchamp Williams, Wales—equal; 52. E. A. Braine, Montrose; J. R. Edward, Scotland; and A. J. de Spiganovicz, Russia—equal; 55. J. W. Falconer, Scotland; K. Ashleigh Glegg, Scotland; W. Mair, Scotland; W. Miller, Scotland; and Edwin Wells, British West Indies—equal; 60. J. F. Allan, Strathspey; John Dunlop, Scotland; W. Eggeling, Scotland; J. M'Kersie Johnstone, Scotland; Alex. M. Malcolmson, Scotland; David A. Ogilvie, Scotland; and W. A. Robinson, New Zealand—equal; 67. J. L. Duncan, Scotland; A. L. Laudie, India; and D. A. Stewart, England—equal; 70. M. N. Bose, India; A. E. Hunter, Scotland; James Kirkwood, Edinburgh; T. Lauder Thomson, England; and H. E. Wareham, Guildford—equal; 75. R. V. C. Ash, Natal; C. H. Lindsay, Ireland; Wm. Murray, Aberdeen; and Andrew L. Roxburgh, Ayrshire—equal; 79. A. A. Brownlee, Scotland; L. W. Pole, Scotland; Ian Struthers Stewart, Scotland; and F. E. Wilson, Scotland—equal; 83. A. H. Firth, Scotland, and J. Politachi, England—equal; 85. R. V. Clark, Scotland; Sidney Gilford, England; W. M'Lachlan, Scotland; and A. B. MacArthur Thomson, Scotland—equal; 89. K. Chapel, Scotland; Wilbert Goodchild, England; E. J. Morton, Scotland; and P. Vickers, Jamaica—equal; 93. John Jamieson, Scotland; 94. G. Cecil Strathairn, Edinburgh; 95. K. D. C. Macrae, Scotland; W. E. Marshall, Perth; E. Thurlow

Potts, England; John Wallace, Lanarkshire; and E. E. Wood, Cape Colony—equal; 100. Paul D. Cremona, West Indies; S. C. Roy, India; R. E. Russell, Cape Town; and H. M. Stumbles, Essex—equal; 104. C. W. Howe, Scotland; 105. George Harrison, England; J. H. Paterson, Ceylon; and Douglas L. Wall, England—equal; 108. J. W. Barrack, Scotland; Hector K. Macdonald, Scotland; Robert Murray, Scotland; C. H. Houghton, Ireland; F. L. Rigby, England; and E. W. Snyth, Victoria—equal; 114. Evan Macmillan, Scotland; C. W. V. Rutherford, Scotland; G. Clark Trotter, Scotland; and George Wight, Scotland—equal.

The following gentlemen were unavoidably absent from one examination:—

FIRST-CLASS HONOURS.—Henry L. Spark, Scotland; V. C. de Boinville, Westmoreland; M. W. Robertson, Scotland.

SECOND-CLASS HONOURS.—W. MacDougall, Scotland; H. G. Pesel, England; A. H. M'Shine, Trinidad; Miles Johnston, Uruguay; P. Pattison, Scotland; E. C. C. Maunsell, Ireland; C. W. Somerville, Scotland.

A. R. SIMPSON, M.D., *Professor.*

## SYSTEMATIC SURGERY.

### SENIOR CLASS.

FIRST-CLASS HONOURS.—1. W. E. Carnegie Dickson (*Metallist*), Edinburgh; 2. W. Newlands, New Zealand; 3. John Fraser Orr, Scotland; 4. George M'Farland, New Zealand; 5. P. F. M'Farlan, Scotland, and W. H. Prentice, M.A., Edinburgh—equal; 7. R. V. Clark, Scotland; 8. W. Hamilton, Ireland, and P. C. Mules, New Zealand—equal; 10. William Mair, Scotland; 11. P. C. Calder, Scotland, and J. H. Smail, Scotland—equal; 13. R. A. J. Harper, Scotland; 14. C. M. Anderson, Ireland; D. M. Callender, M.A., Edinburgh; Shaik Dawood, India; Stephen Garvin, Ireland; and A. M. Malcolmson, Scotland—equal; 19. R. T. Baillie, Brechin.

SECOND-CLASS HONOURS.—20. James Brocket, Scotland; 21. Henry Buist, Dundee; W. M'Dougall, Scotland; D. M. Selby, Scotland; T. A. Smyth, Ireland; and F. E. Wilson, Scotland—equal; 26. A. E. Hunter, Scotland, and G. C. I. Robertson, Aberdeen—equal; 28. Robert Murray, Scotland; 29. E. E. Wood, Cape Colony; 30. J. H. Meikle, Scotland; 31. S. Lyle, Ireland, and D. Young, Scotland—equal; 33. John Hamilton, Scotland; 34. J. R. Edward, Scotland; Edgar Jones and W. H. Swaffield, London—equal; 37. J. F. Allan, Scotland; 38. J. Morrison, Ireland; 39. M. W. Robertson, Scotland; 40. J. L. Palmer, Dublin; George Pereria, Trinidad; and L. W. Pole, Scotland—equal; 43. E. Macmillan, Scotland; William Murray,

Scotland ; and H. M. Roberts, Wales—equal ; 46. F. L. Rigby, England ; 47. D. A. Stewart, London ; 48. E. Wells, West Indies.

## PRACTICAL SURGERY.

### SENIORS.

HONOURS.—Mr George M'Farland, New Zealand (*Medallist*) ; John Fraser Orr, Scotland (*Prox. Acces.*) ; C. M. Anderson, Ireland ; W. E. Carnegie Dickson, Edinburgh ; R. V. Clark, Scotland ; Stephen Garvin, Ireland ; R. A. J. Harper, Scotland ; S. Lyle, Ireland ; W. M'Dougall, Scotland ; J. H. Meikle, Scotland ; P. F. M'Farlan, Scotland ; W. Newlands, New Zealand ; W. H. Prentice, M.A., Edinburgh ; W. M. Selby, Scotland ; T. A. Smyth, Ireland ; J. H. Smail, Scotland ; W. H. Swaffield, London ; F. E. Wilson, Scotland ; E. E. Wood, Cape Colony ; D. Young, Elgin.

JOHN STEVENSON, M.B., *Demonstrator.*

### JUNIORS.

FIRST-CLASS HONOURS.—1. Robert Donaldson, M.A., Musselburgh ; 2. E. Henderson, Ayrshire ; 3. Arthur C. Strain, Scotland (*Medallists*) ; 4. Thomas H. Easton, Scotland, and Arch. D. M'Callum, England—equal ; 6. P. A. Harry, Jamaica ; 7. R. S. Enever Todd, M.A., Musselburgh ; 8. David Brown, Scotland ; Hugh R. Macintyre, China, and John Saffley, Dumfriesshire—equal ; 11. Arch. Oliver, Scotland ; 12. Chas. J. Smith, Scotland ; 13. James Lochhead, M.A., Earlston ; 14. J. Craw, Scotland ; Hope M. Gillespie, Scotland ; John Kirk, Scotland ; and W. A. Wilson Smith, Scotland—equal ; 18. R. Balfour Barnettson, Edinburgh ; S. A. M'Clintock, Ireland ; and J. H. Montgomery, Ireland—equal.

SECOND-CLASS HONOURS.—21. J. M. R. Flament, Trinidad ; John Jardine, Scotland ; and Wm. Bruce Wishart, Scotland—equal ; 24. Wm. J. Fraser, Ceylon ; M. M. Mamourian, Smyrna ; and David G. Marais, South Africa—equal ; 27. W. M. Munby, North Shields ; 28. J. P. M'Gowan, Dumfries ; Alex. MacRae, Scotland ; and D. S. Murray, Scotland—equal ; 31. James A. Ross, Perth ; H. M. Thomson, England ; and D. P. D. Wilkie, Scotland—equal ; 34. John Grieve, Edinburgh, and K. A. Moody Stewart, Scotland—equal ; 36. D. Irving Anderson, England ; D. W. Boswell, Norfolk ; A. W. Neil, Scotland ; and Chas. S. Ryes, India—equal ; 40. R. A. Chapman, England ; A. G. Coullie, Scotland ; Patrick Steele, Edinburgh ; and R. W. L. Wallace, Scotland—equal ; 44. Wm. Grant, Arbroath ; R. S. Munro, England ; and Hugh H. Stewart, Scotland—equal ; 47. Wm. H. Forsyth, England ; J. M. Graham, Edinburgh ; G. S. Loudon, R. J. Mackessack, Forres ; and Garfield Ormrod,

Cumberland—equal; 52. G. S. Clark, Scotland; John Morris, Wales; and Geo. H. Ussher, New Zealand—equal; 55. A. R. Berrie, India; D. M. C. Church, Scotland; Arch. Gillespie, Scotland; James B. Lockerbie, Scotland; A. P. G. Lorimer, Edinburgh; L. S. Milne, Montrose; and G. McCall Smith, Scotland—equal; 62. J. W. H. Babington, Ireland; T. B. Mouat, Haddington; H. S. Reid, Scotland; and J. G. B. Shand, Scotland—equal; 66. R. W. D. Hewson, Cheshire, and R. M. Liddell, England—equal; 68. Murray Cohen, Canada; T. E. Coulson, Lincolnshire; and G. D. Mathewson, Scotland—equal; 71. J. H. H. Joubert, Cape Colony, and H. Overy, England—equal; 73. T. F. Campbell, England; E. J. Elliot, Scotland; W. W. Greer, Queensland; G. P. Joy, London; and William Stenhouse, Scotland—equal; 78. John Clarke, Ireland; C. G. Edmonston, Scotland; K. U. A. Inniss, Trinidad; and Thomas Wright, Ireland—equal; 82. J. R. Bartholomew, Scotland; J. T. Gunn, Scotland; and Arch. Todrick, Haddington—equal; 85. William F. Archibald, India; Mohamed Ashruff, India; and C. D. O'Neal, Barbadoes—equal; 88. G. T. Drummond, Scotland; 89. Douglas Bell, Barrow-in-Furness; A. S. L. Biggart, England; Noel J. H. Gavin, New Zealand; and William Macgill, Ireland—equal; 93. Pollock Donald, Scotland, and Archibald Simpson, Scotland—equal; 95. George Stewart, Scotland.

## PRACTICAL SURGERY.

### JUNIORS.

HONOURS.—Thomas H. Easton, Scotland (*Medallist*); Hope M. Gillespie, Scotland (*Prax. Accs.*); R. Balfour Barnetson, Edinburgh; J. R. Bartholomew, Scotland; D. Brown, Scotland; R. A. Chapman, England; D. M. C. Church, Scotland; J. Craw, Scotland; R. Donaldson, M.A., Musselburgh; C. G. Edmonston, Scotland; J. M. R. Flament, Trinidad; Wm. Grant, Arbroath; J. M. Graham, Edinburgh; John Grieve, Edinburgh; P. A. Harry, Jamaica; E. Henderson, Ayrshire; James Lochhead, Earlston; A. P. G. Lorimer, Edinburgh; Hugh R. Macintyre, China; Arch. D. McCallum, England; Alex. MacRae, Scotland; J. Morris, Wales; J. B. Mouat, Haddington; D. S. Murray, Scotland; A. W. Neil, Scotland; Garfield Ormrod, Cumberland; John Saffley, Dumfriesshire; Chas. J. Smith, Scotland; A. C. Strain, Scotland; K. A. Moody-Stewart, Scotland; R. S. Enever Todd, M.A., Musselburgh; G. H. Ussher, New Zealand; R. W. L. Wallace, Scotland.

GEORGE L. CHIENE, M.B., C.M., *Demonstrator.*  
JOHN CHIENE, C.B., M.D., *Professor.*

### DISEASES OF THE SKIN.

WINTER SESSION, 1900—FIRST-CLASS HONOURS.—1. A. R. Wallis (*Prizeman*); 2. A. Khan Luddie.

SECOND-CLASS HONOURS.—3. Shaik Dawood.

SPRING SESSION, 1901—FIRST-CLASS HONOURS.—1. David Munro (*Prizeman*); 2. W. H. Prentice.

W. ALLAN JAMIESON, M.D., *Lecturer.*

## Faculty of Music.

### WINTER SESSION, 1900-1901.

#### HARMONY.

HONOURS CERTIFICATE.—1. Mary A. D. Hatcly (*Medallist*); 2. Alison Jane Hope; 3. Nellie O. Howie; 4. Eleanor J. Kerr.

HONOURABLE MENTION CERTIFICATE.—5. Constance Margaret Harley; 6. Christina M. A. Harley.

#### ADVANCED HARMONY.

HONOURS CERTIFICATE.—1. William B. Moonie (*Medallist*); 2. Eliza M. Burt; 3. May Elliot.

HONOURABLE MENTION CERTIFICATE.—4. Harriet E. Simpson; 5. Mary B. Ritchie; 6. Agnes Macdonald; 7. Enid Fraser Moir.

#### COUNTERPOINT AND COMPOSITION.

##### FIRST SECTION.

HONOURS CERTIFICATE.—1. Janet G. Cooper (*Medallist*); 2. Eliza M. Burt; 3. William B. Moonie; 4. May Elliot.

HONOURABLE MENTION CERTIFICATE.—5. Agnes Macdonald; 6. Mary B. Ritchie.

##### SECOND SECTION.

HONOURS CERTIFICATE.—John Peebles Conn.

#### HISTORY OF MUSIC.

HONOURS CERTIFICATE.—1. Eliza M. Burt (*Medallist*); 2. May Elliot; 3. William B. Moonie; 4. Margaret L. M. Low.

HONOURABLE MENTION CERTIFICATE.—5. Constance Margaret Harley; 6. Mary A. D. Hatcly; 7. Christina M. A. Harley; 8. Harriet E. Simpson; 9. Mary B. Ritchie.

#### ANALYSIS.

HONOURS CERTIFICATE.—1. John Peebles Conn, (*Medallist*); 2. Frank Crosbie; 3. Christopher E. Allsop; 4. Janet Jeffrey.

HONOURABLE MENTION CERTIFICATE.—5. Mary B. Ritchie; 6. William B. Moonie; Christina M. Harley; 8. Enid Fraser Moir.

FREDERICK NIECKS, Mus.D., *Professor.*



# Examination Papers.



EXAMINATION PAPERS, 1900-1901.

Preliminary Examination Papers for Degrees  
in Arts, Science, Law (B.L.), and Music.

ENGLISH.—FIRST PAPER.

SATURDAY, 29th September 1900.—9 to 11 A.M.

FIVE, and not more than FIVE questions are to be answered. Questions 1, 2, and 6, must be answered by all.

1. Write an essay of from two to three pages long, on one of the following subjects :—

- (1) If you wished to emigrate, what country would you choose, and why ?
- (2) Progress in the Nineteenth Century.
- (3) Thackeray as a satirist and teacher.

2. Paraphrase :—

“ He above the rest

In shape and gesture proudly eminent  
Stood like a tow'r ; his form had not yet lost  
All her original brightness, nor appear'd  
Less than Arch-angel ruin'd, and th' excess  
Of glory obscur'd : as when the sun new-ris'n  
Looks through the horizontal misty air,  
Shorn of his beams ; or from behind the moon  
In dim eclipse disastrous twilight sheds  
On half the nations, and with fear of change  
Perplexes monarchs. Darkened so, yet shone  
Above them all th' Arch-angel : but his face  
Deep scars of thunder had intrench'd, and care

Sat on his faded cheek, but under brows  
 Of dauntless courage, and considerate pride  
 Waiting revenge: cruel his eye, but cast  
 Signs of remorse and passion, to behold  
 The fellows of his crime, the followers rather,  
 Far other once beheld in bliss, condemn'd  
 For ever now to have their lot in pain."

3. Derive *eight* of the following words: Island, gazette, tribulation, sluggard, pantry, maudlin, lieutenant, able, green, infantry, dim, dungeon, cousin, butcher.

4. Explain and illustrate the proper usage of *shall* and *will*.

5. Re-write, so as to correct or improve the following sentences, *giving reasons for any changes you may make* :—

(a) Domestic society is the seminary of social affections, where the first elements are acquired of that tenderness and humanity which cements mankind together; and which, were they entirely extinguished, the whole fabric of social institutions would be dissolved.

(b) There are few words in the English language which are employed in a more loose or circumscribed sense than those of the fancy and the imagination.

(c) Never examining accounts, nor referring to receipts, it was no wonder that his affairs fell into confusion. On grappling with them seriously at last, he was found to be even more deeply in arrears than had been imagined.

(d) At the very time when he and his cousin were discussing his misgivings, the fair damsel to whom he had plighted his troth, was indulging in an equally clouded forecast of her own future in the chaste recesses of her suburban home.

6. Give a *general* analysis of the following passage, and parse the words in *italics* :—

As when, upon a *trancèd summer night*,  
 Those green-robed senators of mighty woods,

Tall oaks, branch-charmed by the earnest stars,  
 Dream, and so dream all night without a stir,  
 Save from one gradual solitary gust  
 Which comes upon the silence, and dies off,  
 As if the ebbing air had *but* one wave ;  
 So came these words and went.

## SECOND PAPER.

SATURDAY, 29th September 1900.—12 NOON to 2 P.M.

EIGHT, and not more than EIGHT, questions are to be answered. Of these, THREE must be taken from Section A (and of the THREE 5 must be one), THREE from Section B, and TWO from Section C.

### A.

1. Give some account of *not more than three* of the following :  
 The Wife of Bath, Una, Malvolio, Lycidas, A Tale of a Tub,  
 Rasselas, The Task, The Eve of St. Agnes, In Memoriam, Westward  
 Ho !

Or,

State briefly the poetical merits and defects of Pope or of Coleridge.

2. What are the passages most admirable as poetry in *Richard III.*, and in what scenes does Shakespeare's faculty of drawing character chiefly show itself ?

3. How does Thackeray present the characters of any *three* of the following : Steele, Addison, Swift, the Old Chevalier, and Isabel, Lady Castlewood ?

4. Summarise and discuss any *two* of the following passages in *Marmion* : The description of Romance in the Introduction ; The voyage from Whitby to Holy Island ; the Host's Tale and the adventure following ; the ghostly summons at the Cross.

5. Annotate :—

(a) Now is the winter of our discontent  
 Made glorious summer by this sun of York.

(b) A base foul stone, made precious by the foil  
Of England's chair, where he is falsely set.

(c) The flash of that satiric rage  
Which, bursting o'er the early stage,  
Branded the vices of the age,  
And broke the keys of Rome.

(d) Where my great grandsire came of old,  
With amber beard and flaxen hair.

(e) As he rode along the lines to battle, or galloped up in the nick of time to a battalion reeling from before the enemy's charge or shot, the fainting men and officers got new courage as they saw the splendid calm of his face, and felt that his will made them irresistible.

(f) "I lay this at your feet and stamp upon it: I draw this sword, and break it, and deny you."

## B.

1. Give some account of *four* of the following: the first Duke of Buckingham of the Villiers family, Sir Edward Coke, Pym, Prince Rupert, Blake, Sir William Temple, Halifax (Savile), Lauderdale, Claverhouse, Somers, Sanicroft.

2. Give a somewhat fuller account of Strafford *or* of the Duke of Monmouth.

3. Write notes on *four* of the following: monopolies; the Hampton Court Conference; the "Addled" Parliament; ship money; the major-generals; the Cabal; the Declaration of Indulgence; Darien.

4. Sketch in order the chief events of *one* of the following periods: 1603-1612; 1642-1647; *or* 1688-1702.

5. What were the main changes which came upon thought and practice in politics, literature, religion and manners, at or about the Restoration?



### C.

1. Draw a map of Africa as far southwards as a line drawn from the mouth of the Congo to Zanzibar, with the chief political divisions, rivers, lakes and towns.

2. Follow the coast of Scotland westwards and southwards from John o' Groats to the Mull of Galloway, indicating the chief geographical features as they occur.

3. What countries have points of influence, political and commercial, on the Gulf of Pechili, the Persian Gulf, the east coast of Africa?

4. Trace the course of any two of the larger rivers of France, indicating the places of interest thereon.

#### FIRST PAPER.

SATURDAY, 30th March 1901.—9 to 11 A.M.

FIVE, and not more than FIVE, questions are to be answered. Questions 1, 2, and 6 must be answered by all.

The Candidate must write on his or her books the number of the table at which he or she sits.

1. Write an essay, of from two to three pages long, on *one* of the following subjects:—

- (1) On the Remedies for overcrowding in large Cities.
- (2) The character of Edmund in *Lear*, as compared with some of Shakespeare's other "villains."
- (3) The Scottish Covenanters as depicted by Scott.

2. Paraphrase:—

What are we set on earth for? Say, to toil;  
Nor seek to leave thy tending of the vines  
For all the heat o' the day, till it declines,  
And Death's mild curfew shall from work assoil.  
God did annoint thee with His odorous oil,  
To wrestle, not to reign; and He assigns

All thy tears over, like pure crystallines,  
 For younger fellow-workers of the soil  
 To wear for amulets. So others shall  
 Take patience, labour, to their heart and hand,  
 From thy hand and thy heart and thy brave cheer,  
 And God's grace fructify through thee to all.  
 The least flower, with a brimming cup may stand,  
 And share its dew-drop with another near.

3. Give the derivation of *eight* of the following words:—  
 jeopardy, ketchup, poultry, sward, truce, umpire, orison,  
 donkey, counterpane, wedlock, myrmidon, pew, phylloxera,  
 minstrel, bugle.

4. Explain the terms *relative pronoun* and *conjunctive pronoun*.  
 Exemplify the use of each of the relative pronouns and show,  
 especially, how *who* differs in usage from *that*.

5. Re-write, so as to correct or improve, the following sentences,  
 giving reasons for any changes you may make:—

(a) Edinburgh has good fortifying purposes, being surrounded  
 by hills, and such places as the house where John Knox lived,  
 etc., are very interesting, and every one flocks to see them.

(b) A courtier in the time of Elizabeth, whose father having  
 died early, he was left the charge of a younger brother Robert  
 to whom he was almost as father.

(c) I am not obliged to read any book for this examination.

(d) As the author of the Laws of Nature, of the material,  
 rational, and animal world, I am indebted to him for every  
 benefit which I have derived from this grand system of divine  
 wisdom and goodness.

6. Give a *general* analysis of this passage, and parse the  
 words in italics:—

Were it not better,  
 Because that I am more *than common* tall,  
 That I did suit *me* all points *like* a man?

A gallant curtle-axe upon my thigh,  
A boar-spear in my hand ; and—in my heart  
Lie there *what* hidden woman's fear there will—  
We'll have a swashing and a martial outside,  
As many other mannish cowards have  
That do outface it with their semblances.

# SECOND PAPER.

SATURDAY, 30th March 1901. —12 NOON to 2 P.M.

EIGHT and not more than EIGHT, questions are to be answered. Of these, THREE must be taken from Section A (and of the THREE, 5 must be one), THREE from Section B, and TWO from Section C.

The Candidate must write on his or her books the number of the table at which he or she sits.

## A.

1. Give a short account of any *three* (but not more) of the following :—Jaques, Griselda, Uncle Toby, *The Castle of Otranto*, *The Faerie Queene*, *Piers Plowman*, Becky Sharp, *Isabella or the Pot of Basil*, *Rizpah*, *Jane Eyre*.

Or,

Describe concisely the leading characteristics of the poetry of William Wordsworth.

2. Enumerate and comment upon some of the more striking passages, in point of dramatic force or literary excellence, in *King Lear*.

Or,

Describe and compare the families of King Lear and Gloucester.

3. Give some account of the Newcastle-Pitt administration.

Or,

What were Chatham's opinions on the various constitutional questions under discussion during the first eighteen years of the reign of George III ?

4. Describe any *two* of the following scenes from *Old Mortality*:—Lady Margaret Bellenden dismisses Mause and Cuddie; the arrest of Morton at Milnwood; the trial of Morton by Claverhouse in Tillietudlem Castle; Burley gains Morton over to the Covenanters; the trial of the Covenanters in Edinburgh.

5. Annotate:—

- (a) "There's your press-money. That fellow handles his  
how like a crow-keeper; draw me a clothier's yard.  
Look, look, a mouse! Peace, peace;—this piece of  
toasted cheese will do't. There's my gauntlet; I'll  
prove it on a giant.—Bring up the brown bills. O,  
well-flown, bird! i' the clout, i' the clout: hewgh!  
Give the word."
- (b) "I stumbled when I saw: full oft 'tis seen  
Our means secure us; and our mere defects  
Prove our commodities."
- (c) "Enough of blood has been shed; give quarter to the  
king's misguided subjects."
- (d) "We are both fanatics; but there is some distinction  
between the fanaticism of honour and that of dark  
and sullen superstition."
- (e) "On the day on which he became a politician, he be-  
came a Cabinet minister."
- (f) "They were the King's friends."

B.

Candidates must in this section take the questions of only *one* period.

FIRST PERIOD.—55 B.C. to 1603 A.D.

1. Write brief notes on *four* of the following:—Agricola, Council of Whitby, early names for "Parliament," Anselm, John Balliol, Wyclif, Warwick, James IV., Hertford's Raids in Scotland, the Sea Dogs.

2. Give an account of the statesmanship of any *one* of the

following:—Henry II., Simon de Montfort, Thomas Cromwell, Queen Elizabeth.

3. Select as subject for a short historical essay any *one* of the following:—Prelates as Statesmen, the Struggle between Crown and Baronage, Gain and Loss of English Possessions in France, Legal Measures of the Thirteenth Century, Phases of the Reformation in England between 1530 and 1550.

#### SECOND PERIOD.—1603-1707.

1. Write brief notes on *four* of the following:—Villiers, Treaty of Berwick, Triennial Bills, Rupert, Second Civil War, Instrument of Government, Royal Society, the Popish Terror, The Declaration of Indulgence, Act of Settlement, the Union of 1707

2. Write the biography of any *one* of the following:—Pym, Clarendon, William III., Marlborough.

3. Make any *one* of the following the subject of a short historical essay:—The Puritans as political, social, and religious reformers; Various attempts to enforce Episcopacy in Scotland: "The Stuart Kings were all tainted with duplicity"; Condition of Ireland in the Seventeenth Century; Political significance of the Revolution of 1689.

#### THIRD PERIOD.

1. Write brief notes on any *four* of the following:—Duchess of Marlborough, Treaty of Utrecht, Caroline of Anspach, Walpole's enemies, Battle of Falkirk, "George, be a king!" Rockingham, Sieges of Gibraltar, Saratoga, Torres Vedras, Peterloo, Reform of Criminal Code, the Holy Alliance.

2. Write a short biography of any *one* of the following:—Bolingbroke, Burke, the Younger Pitt, Nelson.

3. Write a short historical essay on *one* of the following:—The Rise of Cabinet Government; Fall of the Tories in 1714 and of the Whigs in 1760; Philanthropic movements of the

Eighteenth Century traceable to the Wesleyan Revival: Gain and Loss of Empire by Britain in the Eighteenth Century; Some effects—political, moral, and literary—of the French Revolution of 1789.

### C.

1. Draw a map of Australia, Tasmania, and New Zealand, showing the boundaries between the colonies with their capital cities and other important towns.

2. Indicate generally the extent and population, the climate and other physical characteristics, and the chief productions and industries of the Dominion of Canada.

3. What are the present relations of Egypt towards (1) the Porte, (2) Great Britain, (3) other European Powers?

4. Draw a map of the coast of China (including Korea), with the principal coast towns and neighbouring islands, and indicate the places occupied by European Powers.

## LATIN—HIGHER STANDARD.

### FIRST PAPER.

TUESDAY, 2nd October 1900.—9 to 11 A.M.

#### I. For Latin Prose:—

*(Gulliver in Brobdingnag.)*

The Queen became so fond of my company that she could not dine without me: and I now became so great a favourite with the King that every Wednesday, on which day the King and Queen dine together, my little chair and table were placed at His Majesty's left hand before one of the salt-cellars. This prince took a great pleasure in conversing with me, inquiring into the manners, religion, laws, government, and learning of Europe; wherein I gave him the best account I was able. His apprehension was so clear, and his judgment so exact, that he



made very wise reflections and observations upon all I said. But I confess that after I had been a little too copious in talking of my own beloved country, of our trade, and wars by sea and land, of our schisms in religion, and parties in the state, the prejudices of his education prevailed so far that he could not forbear taking me up in his right hand, and, after a hearty fit of laughing, he asked me whether I was a Whig or a Tory.

## II.—GRAMMAR.

1. (a) Give the principal parts of *sono, indulgeo, confido, pariscor*.  
 (b) Parse the following, and mark the quantity of every syllable in each: *convenis, convenisses, dolabere, trucidabas*.
2. (a) Mention, with illustrations, some of the principal uses of the dative case in Latin.  
 (b) Write and translate short Latin sentences, giving the exact force of each of the following words: *quisquam, quisque, quamvis, nedum*.  
 (c) How would you express in Latin?—  
     (1) I wish you would come.  
     (2) See that you come.  
     (3) Beware of coming.  
     (4) Do not come.
3. (a) Scan the following lines:—  
     Migrandum est, ut mane domi te, Galle, salutem :  
     Es tanti, vel si longius illa foret.  
     Sed tibi non multum est, unum si praesto togatum :  
     Multum est, hunc unum si mihi, Galle, nego.  
 (b) Explain carefully the following expressions: *decies sester-tium* ; *decemviri legibus scribundis* ; *ius intercessionis* ; *ius provocationis* ; *ultimum decretum* ; *lex provinciae*.

## SECOND PAPER.

TUESDAY, 2nd October 1900.—12 NOON to 2 P.M.

## I. Translate:—

(a) Nunc, quoniam hostis est indicatus Dolabella, bello est persequendus. Neque enim quiescit: habet legionem, habet fugitivos, habet sceleratam impiorum manum: est ipse confidens, impotens, gladiatorio generi mortis addictus. Quam ob rem quoniam Dolabellâ hesterno die hoste decreto bellum gerendum est, imperator est deligendus. Duæ dictæ sunt sententiæ, quarum neutram probo: alteram, quia semper, nisi cum est necesse, periculosam arbitror: alteram, quia alienam his temporibus existimo. Nam extraordinarium imperium populare atque ventosum est, minime nostræ gravitatis, minime huius ordinis. Bello Antiochino, magno et gravi, cum L. Scipioni provincia Asia obvenisset, parumque in eo putaretur esse animi, parum roboris, senatusque ad collegam eius, C. Laelium, illius Sapientis patrem, negotium deferret, surrexit P. Africanus, frater maior L. Scipionis et illam ignominiam a familia deprecatus est, dixitque et in fratre suo summam virtutem esse summumque consilium, neque se ei legatum, id ætatis eisque rebus gestis, defuturum. Quod cum ab eo esset dictum, nihil est de Scipionis provincia commutatum.

(b) (DEMEA, the father of two young men, has been blaming MICIO, their uncle, for indulging them too much.)

DE. Mitto rem: consuetudinem ipsorum! MI. Mane:

Scio: istuc ibam. Multa in homine, Demea,

Signa insunt, ex quibus coniectura facile fit,

Duo quom idem faciunt, sæpe ut possis dicere

“Hoc licet impune facere huic, illi non licet,”

Non quo dissimilis res sit, sed quo is qui facit.

Quæ ego inesse in illis video, ut confidam fore

Ita ut volumus. Video eos sapere, intelligere. in loco

Vereri, inter se amare : scires liberum  
 Ingenium atque animum. Quo vis illos tu die  
 Redducas. At enim metuas ne ab re sint tamen  
 Omissiones paulo. O noster Demea,  
 Ad omnia alia aetate sapimus rectius :  
 Solum unum hoc vitium fert senectus hominibus :  
 Attentiores sumus ad rem omnes quam sat est :  
 Quod illos sat aetas acuet. DE. Ne nimium modo  
 Bonae tuae istae nos rationes, Micio,  
 Et tuus iste animus aequus subvertat. MI. Tace :  
 Non fiet. Mitte iam istaec : da te hodie mihi :  
 Exporge frontem. DE. Scilicet ita tempus fert :  
 Faciundum est : ceterum rus cras cum filio  
 Cum prima luce ibo hinc. MI. De nocte censeo :  
 Hodie modo hilarum fac te.

## II. SENTENCES.

1. There is no doubt that, if you ask him, he will help you as much as he can.
2. You might have left the city, if you desired to do so : but you ought to have finished your work first.
3. The soldiers, forgetting their oath, fled in confusion and were all captured before they reached their camp.
4. The king was persuaded that the man was innocent, but he could not be persuaded to trust him.
5. Promising to wait until we returned, he threatened to punish us if we wasted our time.

## FIRST PAPER.

TUESDAY, 2nd April 1901.—9 to 11 A.M.

*The Candidate must write on his or her books the number of the table at which he or she sits.*

### I. Translate into Latin :—

When the old tyrant died in 367, he was succeeded by his

son Dionysius II. He was twenty-eight years of age, and neither trained nor fitted for the position which fell to his lot. His father, from motives of jealousy, had kept him away from all positions of influence, and it soon became evident that he was unable to govern an empire which was maintainable only by force. His kinsman Dion negotiated a satisfactory peace with Carthage, and thus Dionysius II. might have enjoyed a peaceful rule. He was not, however, fitted even for government in times of peace. It is true he had sense enough to see that a ruler requires knowledge, and he was desirous of acquiring it. Dion conceived the idea of utilising this want to further a bold scheme. Plato was recalled to Syracuse. Through his influence, thought Dion, the tyrant might become a model prince; at all events, it was not impossible that his presence might have some beneficial results. He returned, and in a short time the Syracusan Court, following the tyrant's example, was deep in the study of geometry and drawing circles in the sand.

## II. GRAMMAR, ETC.

1. Give the principal parts of:—*figo, salio, ordior, torreo*; and the exact meanings of:—*profecto, nedum, immo vero, nimirum, non modo . . . sed ne — quidem*.

2. Write the quantity over each syllable in the following words:—*facinus, hodie, humanus, radices, reliquit, datur, salus, prædico (bis)*.

3. Explain the following terms and phrases:—*ambitus, annona, collegium, crocati, heres ex asse, civitate donatus, patria potestas, spolia opima, sistere radimonium*.

4. Scan the following lines:—

Sed, nisi peccassem, quid tu concedere possis?

Materiam veniae sors tibi nostra dedit.

Si, quoties homines peccant, sua fulmina mittat

Juppiter, exiguo tempore inermis erit.

5. Explain:—*hendiadys*, *syncope*, *tnesis*: and translate by English proverbial expressions or otherwise:—*oleum et operam perdere*; *festina lente*; *ne sutor ultra crepidam*.

## SECOND PAPER.

TUESDAY, 2nd April 1901.—12 NOON to 2 P.M.

*The Candidate must write on his or her books the number of the table at which he or she sits.*

### I. Translate into English:—

(a) Socrates, in pompa cum magna vis auri argentique ferretur, "Quam multa non desidero!" inquit. Xenocrates, cum legati ab Alexandro quinquaginta ei talenta attulissent, quae erat pecunia temporibus illis, Athenis praesertim, maxima, abduxit legatos ad cenam in Academiam; iis apposuit tantum, quod satis esset, nullo apparatu. Cum postridie rogarent eum, cui numerari iuberet, "Quid? vos hesterna," inquit, "cenula non intellexistis me pecunia non egere?" Quos cum tristiores vidisset, triginta minas accepit, ne aspernari regis liberalitatem videretur. At vero Diogenes liberius, ut Cynicus, Alexandro roganti, ut diceret, si quid opus esset, "Nunc quidem paululum," inquit, "a sole." Offecerat videlicet apricanti. Et hic quidem disputare solebat, quanto regem Persarum vita fortunaeque superaret; sibi nihil deesse, illi nihil satis umquam fore; se eius voluptates non desiderare, quibus numquam satiari ille posset, suas eum consequi nullo modo posse.

(b) Hoc erat in votis: modus agri non ita magnus,  
hortus ubi et tecto vicinus jugis aquae fons  
et paullum silvae super his foret auctius atque  
di melius fecere bene est. nil amplius oro,  
Maia nate, nisi ut propria haec mihi munera faxis.  
Si neque majorem feci ratione mala rem  
nec sum facturus vitio culpave minorem;

si veneror stultus nihil horum : “O si angulus ille proximus accedat, qui nunc denormat agellum !”

“O si urnam argenti fors quae mihi monstret ! ut illi, thesauro invento qui mercenarius agrum illum ipsum mercatus aravit, dives amico Hercule !” si, quod adest, gratum juvat, hac prece te oro pingue pecus domino facias et cetera praeter ingenium, utque soles, custos mihi maximus adsis.

## II. SENTENCES.

1. At the foot of the mountain there was a severe rather than a long fight.

2. What can it matter to me whether I am well or ill spoken of by my fellow-countrymen ? Ought I to obey man rather than God ?

3. The father told his sons to do, as soon as possible, everything that ought to be done, and not to trouble him with further questions.

4. *Put into Latin in epistolary style*:—April 2nd, 1901. My dear son, I write to learn how you are getting on in my absence. Write back immediately.—Your affectionate father, JULIUS.

## LOWER STANDARD.

MONDAY, 1st October 1900.—9 A.M. to 12 NOON.

### I. Translate :—

(a) Dum haec in Macedonia geruntur, L. Aemilius Paulus, prorogato ex consulatu imperio, principio veris in Ligures induxit exercitum. Ubi primum in hostium finibus castra posuit, legati ad eum per speciem pacis petendae speculatum venerunt. Neganti Paulo nisi cum deditis *parisci* se pacem, non tam id recusabant quam tempore aiebant opus esse ut



generi agresti hominum persuaderetur. Ad hoc decem dierum induciae cum darentur, petierunt deinde, ne trans montes proximos castris *pabulatum* lignatumque milites irent: culta ea loca suorum finium esse. Id ubi impetravere, post eos ipsos montes unde averterant hostem exercitu omni *cōacto*, repente multitudine ingenti castra Romanorum oppugnare simul omnibus portis adgressi sunt, ita ut ne efferendi quidem signa Romanis spatium nec ad *explicandam* aciem locus esset. Confecti in portis obstando magis quam pugnando castra tutabantur. Sub occasum solis cum recessissent hostes, duos equites ad Cn. Baebium proconsulem cum litteris Pisas mittit, ut obsesso per inducias sibi quam primum *subsidio* venerit.

(b) Parse fully the words in *italics* in the above passage.

## II. For Latin prose:—

But the king was too late in offering these terms: for Cromwell and the army had resolved that the author of so much misery and bloodshed should not be allowed to live any longer. They marched on London, and demanded the punishment of the king. Parliament, however, stood firm, and passed a vote approving of the treaty recently made with the king. Thereupon an officer named Pride went down with his troopers to the House, and expelled more than a hundred members. The remaining members were in agreement with the army and voted what the army wanted. Judges were appointed to try the king, and, if he were found guilty, to condemn him to death. His enemies said that he was a traitor and ought to pay the penalty of treason.

## III. GRAMMAR.

1. Give the genitive and accusative singular of *onus*, *sene*, *capus*, *pes*, *dives*, *iter*; and the nominative plural of *flos*, *dos*, *litus*, *cor*, *hospes*, *lapis*.

2. Write down first person singular perfect indicative, the

first supine (if any), and the present infinitive of *sterno, iaceo, iacio, spargo, fallo, irascor, ordior, diffido*.

3. Compare the adverbs *intus, prope, bene, diu*; and mention the adverbs formed from the adjectives *gravis, falsus, simplex, tres*. What cases are governed by the prepositions *ob, inter, de* and *pro*?

4. Distinguish between *quattuor* and *quater*; *bis* and *bini*; *quando* and *aliquando*: and express in English *a. d. iv. Kal. Feb.*

#### IV. SENTENCES.

1. My friends told me that they would forget my fault, if I were willing to pardon my brother.

2. The king sent a messenger home to find out what had happened.

3. The army marched for three days, and on the fourth they saw the enemy two miles off.

4. My servants came to me one at a time, and each of them told me the same thing.

MONDAY, 1st April 1901.—9 A.M. to 12 NOON.

*The Candidate must write on his or her books the number of the table at which he or she sits.*

#### I. Translate:—

Eodem anno in Hispania praetores C. Calpurnius et L. Quinctius, cum primo vere ex hibernis copias eductas iunxissent, in Carpetaniam, ubi hostium castra erant, progressi sunt, communi animo consilioque parati rem gerere. haud procul Dipone et Toletum urbibus inter pabulatores pugna orta est, quibus dum utrimque subvenitur a castris, paulatim omnes copiae in aciem eductae sunt. in eo tumultuario certamine et loca sua et genus pugnae pro hoste fuere. duo exercitus Romani fusi atque in castra compulsi sunt. non institere percussis hostes. praetores

Romani, ne postero die castra oppugnarentur, silentio proximæ noctis tacito signo exercitum abduxerunt. luce prima Hispani acie *instructa* ad vallum accesserunt, vacuaque præter spem castra ingressi, quæ derelicta inter nocturnam trepidationem erant diripuerunt, regressique in sua castra paucos *dies* quietis stativis manserunt. Romanorum sociorumque in proelio fugaque ad quinque millia occisa, quorum se spoliis hostes armarunt.

(a) Parse fully the words in italics in the above.

## II. Translate into Latin :—

A strange thing happened to us when we were staying at our country house last August. One night a man, dressed in shabby clothes and carrying a stick, came into the garden and asked if he could see my father. When I told him that my father was not at home, and that I did not know when he would return, he asked if I had any brothers, and whether we kept a dog. I said that I had two brothers and a dog. At that moment my father came up, and on seeing him the man looked afraid, and went away without saying anything to him. When we got up next morning, although no sound had been heard in the house during night, we found that the door was open, that the man's stick was lying there, and that the dog was dead. But nothing had been taken out of the house. Until we returned to town, we made constant inquiries; but no one had seen the man, and no one has yet suggested an explanation of the occurrence.

## III.—GRAMMAR.

1. Give the gender and genitive singular of *eques*, *funus*, *flor*, *iter*, *nox*; and write down the nominative plural and genitive plural of *senex*, *mons*, *carmen*, *pater*, *tribus*.

2. Give the comparative and superlative of *iuvēnis*, *gracilis*, *nequam*, *ambacter*; form adverbs from the adjectives *dignus* and *gravis*; and give the Latin for *twenty*, *twentieth*, *twenty times*, and *two hundred*. Explain the exact meaning of *uter*, *uterque*, *ambo*, *quisque*, *cuncti*, and *a.d. IV. Kal. Feb.*

3. Mention the principal parts of *ludo, tango, veho, vincio, taedet, soleo, loquor*, and *ordior*.

4. Write short Latin sentences to show the proper construction of *interest, licet, suadere, minari*, and *permittere*.

#### IV.—SENTENCES.

Translate :—

1. My father promised to come home as soon as possible.
2. The general, having drawn up his army between the two camps, awaited the enemy.
3. The old man said that, in order to be happy, we must all work diligently.
4. After staying for three months at Syracuse, we started for home again.

#### GREEK.—HIGHER STANDARD.

##### FIRST PAPER.

WEDNESDAY, 3rd October 1900.—9 to 11 A.M.

I. Translate into Greek :—

(1) Artemisia, Queen of Halicarnassus, was one of the allies of Xerxes, and accompanied him on his expedition against Greece.

(2) She was one of those engaged in the battle of Salamis, and when the day began to go against the Persians she found herself in great danger from which her adroitness saved her.

3) Her ship was being pursued by one of the Athenian vessels, and was unable to escape owing to the crowd which blocked its course.

(4) Thereupon she formed the bold design of charging into one of the Persian vessels in front of her before the Athenians could overtake her.

(5) In this she was successful, for the Athenians taking her

either for one of their own side or for a deserter at once desisted from the chase.

(6) Moreover she gained great respect with Xerxes, who when he saw the vessel sink is reported to have exclaimed, "My men have fought like women and my women like men."

## II. GRAMMAR.

1. Give the 1st singular future active, perfects active and passive, and aorists active, middle and passive, where existing, of χαίρω, πλάσσω, καλῶ, κλαίω, καίω, καθαίρω, καθαιρῶ, καταίρω.

2. Write the infinitive perfect middle or passive of κρίνω, ὀξύνω, ἀνοίγνυμι, ἄπτω. Distinguish τιθείς, τεθείς, ταθείς, τεθείς.

3. Distinguish ποιεῖν λόγον, ποιεῖσθαι λόγον: ἔχειν τι, ἔχασθαι τινος: μαρτυρεῖν, μαρτύρεσθαι: λανθάνειν, λανθάνεσθαι: αἰσχύνεσθαι δρᾶν, αἰσχύνεσθαι δρῶν.

4. Translate and remark on the use of tense or mood in the following:—

(1) φράζε καὶ πεπράξεται.

(2) οἶσθ' ὥς ποιήσον;

(3) προηγόρευεν ὅτι ἐκείνῳ ὥς πολεμίῳ χρήσοιτο.

(4) πῶς πέτοιτό τις εἰς οὐρανόν;

(5) ἐπερρώσθη δ' ἄν τις ἐκείνο ἰδὼν.

5. Explain the exact force of the prepositions in the following compounds:—ἐπιγαμία, ἐπίτριτος: ὑπέρνθρος, ὑπακούειν: μεταπέμπειν, μετέχειν.

## SECOND PAPER.

WEDNESDAY, 3rd October 1900.—12 NOON to 2 P.M.

### I. Translate:—

Οἶδα μὲν ἔγωγε σχεδὸν ὅτι διδάσκειν μὲν ἀνθρώπους ὅπαντας χαλεπὸν ἔστιν, ἐξαπατᾶν δὲ ῥάδιον· καὶ μανθάνουσι μὲν ῥόγῃς, εἰάν τι καὶ μάθωσι, παρ' ὀλίγων τῶν εἰδότεων, ἐξαπατῶνται δὲ τάχιστα ὑπὸ πολλῶν τῶν οὐκ εἰδότεων, καὶ οὐ μόνον γε ὑπο τῶν ἄλλων, ἀλλὰ

καὶ αὐτοὶ ὑφ' αὐτῶν. τὸ μὲν γὰρ ἀληθὲς πικρὸν ἐστὶ καὶ ἀηδὲς τοῖς ἀνθρώποις, τὸ δὲ ψεῦδος γλυκὲ καὶ προσηγνές· ὥσπερ οἶμαι καὶ τοῖς νοσοῦσι τὰ ὅρματα τὸ μὲν φῶς ἐνιαρδὸν ὄραν, τὸ δὲ σκότος ἄλυτον καὶ φίλον, οὐκ ἔων βλέπειν· ἢ πῶς ἂν ἴσχυε τὰ ψεύδη πολλάκις πλέον τῶν ἀληθῶν, εἰ μὴ δι' ἡδονὴν ἐνίκα; χαλεποῦ δὲ, ὡς ἔφην, ὄντος τοῦ διδάσκειν, τῷ παντὶ χαλεπώτερον τὸ μεταδιδάσκειν, ἅλλως τε ὅταν πολὺν τινας χρόνον ὦσι τὰ ψευδῆ ἀκηκοότες καὶ μὴ μόνον αὐτοὶ ἐξηπατημένοι, ἀλλὰ καὶ οἱ πατέρες αὐτῶν καὶ οἱ πάπποι καὶ σχεδὸν πάντες οἱ πρότερον. οὐ γάρ ἐστι ῥάδιον τούτων ἀφελέσθαι τὴν δόξαν, οὐδ' ἂν πᾶν τις ἐξελέγχῃ. καθάπερ οἶμαι τῶν τὰ ὑποβολιμαῖα παιδιάρια θρεψάντων χαλεπὸν ἵστερον ἀφελέσθαι τὰ ληθῆ λέγοντα ἃ γε ἐν ἀρχῇ, εἴ τις αὐτοῖς ἔφρασεν, οὐκ ἂν ποτε ἀνείλυντο.

II. Translate one of the following passages:—

(a) *Consolations of Poetry.*

ὦ τάν, ἄκουσον ἢν τί σοι δοκῶ λέγειν.  
 ἄνθρωπός ἐστι ζῶον ἐπίπονον φύσει,  
 καὶ πολλὰ λυπήρ' ὁ βίος ἐν ἑαυτῷ φέρει.  
 παραψυχὰς οὖν φροντίδων ἀνεύρετο.  
 τοὺς γὰρ τραγωδοὺς πρῶτον, εἰ βούλει, σκόπει  
 ὡς ὠφελοῦσι πάντας. ὁ μὲν ὦν γὰρ πένης  
 πτωχότερον αὐτοῦ καταμαθὼν τὸν Τήλεφον  
 γενόμενον ἤδη τὴν πενίαν ῥῶον φέρει.  
 ὁ νοσῶν τι μανικὸν Ἀλκμέων' ἐσκέψατο.  
 ὀφθαλμῖα τις, εἰσὶ Φινεΐδαι τυφλοί·  
 τέθνηκέ τῳ παῖς, ἢ Νιόβη κεκούφικεν.  
 χωλός τίς ἐστι, τὸν φιλοκτῆτην ὄρῃ.  
 γέρων τις ἀτυχεῖ, κατέμαθεν τὸν Οἰνέα.  
 ἅπαντα γὰρ τὰ μείζον' ἢ πέπονθέ τις  
 ἀτυχήματ' ἄλλοις γεγονότ' ἐννοοίμενος  
 τὰς αὐτὸς αὐτοῦ συμφορὰς ἦπτον στένει.

(b) Γλαῦκε, τίη δὴ νῶϊ τετιμῆμεσθα μάλιστα  
 ἔδρη τε κρέασίν τ' ἡδὲ πλείοις δεπᾶεσσιν  
 ἐν Λυκίῃ, πάντες δὲ θεοὺς ὡς εἰσορώσωσιν;



τῷ νῦν χρὴ Λυκίοισι μέτα πρώτοισιν ἔοντας  
 ἐστάμεν, ἣδὲ μάχης καυστερῆς ἀντιβολῆσαι·  
 ὄφρα τις ᾧδ' εἴπῃ Λυκίων πύκα θωρηκτῶν·  
 οὐ μὰν ἀκληεῖς Λυκίην κάτα κοιρανέουσιν  
 ἡμέτεροι βασιλῆες, ἔδουσί τε πίονα μῆλα  
 οἶνόν τ' ἔξαιτον, μελιηδέα· ἀλλ' ἄρα καὶ ἴς  
 ἐσθλή, ἐπεὶ Λυκίοισι μέτα πρώτοισι μάχονται.  
 ᾧ πέπον, εἰ μὲν γὰρ πόλεμον περὶ τόνδε φυγόντε,  
 αἰεὶ δὴ μέλλοιμεν ἀγῆρω τ' ἀθανάτῳ τε  
 ἔσσεσθ', οὔτε κεν αὐτὸς ἐνὶ πρώτοισι μαχοίμην,  
 οὔτε κε σὲ στέλλοιμι μάχην ἐς κυδιάνειραν·  
 νῦν δ'—ἔμψης γὰρ Κῆρες ἐφειστᾶσιν θανάτοιο  
 μυρίαί, ἃς οὐκ ἔστι φυγεῖν βροτὸν οὐδ' ὑπαλῆξαι—  
 ἴομεν, ἥε τῷ εὖχος ὀρέξομεν, ἥε τις ἡμῖν.

# FIRST PAPER.

WEDNESDAY, 3rd April 1901.—9 to 11 A.M.

*The Candidate must write on his or her book the number of the table at which he or she sits.*

## I. Translate:—

οἱ ἄνθρωποι ἐπιθυμοῦσι μὲν ἐλεύθεροι εἶναι μάλιστα πάντων, καὶ φασὶ τὴν ἐλευθερίαν μέγιστον τῶν ἀγαθῶν. τὴν δὲ δουλείαν αἰσχιστον καὶ δυστηχέστατον ὑπάρχειν, αὐτὸ δὲ τοῦτο, ὅ,τι ἐστὶ τὸ ἐλεύθερον εἶναι ἢ ὅ,τι τὸ δουλεύειν, οὐκ ἴσασιν. καὶ τοίνυν οὐδὲ ποιῶσιν οὐδέν, ὥς ἔπος εἰπείν, ὅπως τὸ μὲν αἰσχρὸν καὶ χαλεπὸν ἐκφείξονται, τὴν δουλείαν, ἧ δὲ δοκεῖ αὐτοῖς πολλοῦ ἄξιον εἶναι, κτήσονται. τὴν ἐλευθερίαν, ἀλλὰ τοῖναντίον ταῦτα πράττουσιν, ἐξ ᾧ ἀνάγκη τοὺς ἐπιτηδεύοντας διατελεῖν δουλεύοντας τὸν ἅπαντα χρόνον καὶ μηδεπώποτε ἐλευθερίας ἐπιτυγχάνειν. πλὴν τούτους οὐκ ἄξιον ἴσως θαυμάσαι ὅτι οὔτε ἐλεῖν οὔτε φιλάξασθαι δύνανται ὁ τυγχάνουσιν ἀγνοοῦντες. εἰ γοῦν ἐτέρχαντο ἀγνοοῦντες πρόβατον καὶ λύκον ὅ,τι ἐστὶν ἐκάτερον αὐτῶν, ὅμως δὲ ἡγοῦντο τὸ μὲν ὠφέλιμον καὶ κτήσασθαι ἀγαθόν, τὸ δὲ βλαβερόν καὶ ἀσέμφορον,

οὐκ ἂν ἦν θαυμαστὸν οὐδὲν εἰ τὸ μὲν πρόβατον ἐφοβοῦντο καὶ ἔφειγον ἐνίοτε ὡς λύκοι, τὸν δὲ λύκον προσείντο καὶ ὑπέμενον, νομίσαντες πρόβατον· ἡ γὰρ ἄγνοια τοιαῦτα ἐργάζεται τοὺς οὐκ εἰδότας καὶ ἀναγκάζει τάναντία φεύγειν καὶ διώκειν ὃν βούλονται καὶ τῶν συμφερόντων.

II. Translate *one* of the following passages:—

- (a) A. κακῶς ἀπόλοιθ' ὅστις γυναῖκα δεύτερος  
 ἔγημε· τὸν γὰρ πρῶτον οὐκ ἐρῶ κακῶς·  
 ὁ μὲν γὰρ ἦν ἄπειρος, οἶμαι, τοῦ κακοῦ,  
 ὁ δ' οἶον ἦν γυνὴ κακὸν πεπυσμένος.
- B. ὦ Ζεῦ πολυτίμητ' εἶτ' ἐγὼ κακῶς ποτε  
 ἐρῶ γυναῖκας; νῆ Δί' ἀπολοίμην ἄρα.  
 πάντων ἄριστον κτημάτων, εἰ δ' ἐγένετο  
 κακὴ γυνὴ Μήδεια, Πηνελόπη δέ γε  
 μέγα πρᾶγμ'. ἔρεϊ τις ὡς Κλυταιμνήστρα κακῇ.  
 Ἄλκηστιν ἀντέθηκα χρηστήν. ἀλλ' ἴσως  
 Φαίδραν ἔρεϊ κακῶς τις· ἀλλὰ νῆ Δία  
 χρηστή τις ἦν μέντοι—τίς;—οἶμοι δαίλειος  
 ταχέως γε μ' αἱ χρησταὶ γυναῖκες ἐπέλιπον,  
 τῶν δ' αὖ πονηρῶν ἔτι λέγειν πολλὰς ἔχω.
- (b) οὗτος δ' Αἴας ἐστὶ πελώριος, ἔρκος Ἀχαιῶν·  
 Ἴδομενεὺς δ' ἐτέρωθεν ἐνὶ Κρήτεσσι θεὸς ὡς  
 ἔστηκε, ἀμφὶ δέ μιν Κρητῶν ἀγοὶ ἡγερέθονται.  
 πολλὰκι μιν ξείνισεν Ἀρηΐφιλος Μενέλαος  
 οἴκῳ ἐν ἡμετέρῳ, ὅποτε Κρήτηθεν ἵκοιτο.  
 νῦν δ' ἄλλους μὲν πάντας ὀρῶ ἐλίκωπας Ἀχαιοὺς,  
 οὓς κεν ἐν γνοίην καὶ τ' οὔνομα μυθησαίμην·  
 δοιῶ δ' οὐ δύναμαι ἰδέειν κοσμήτορε λαῶν,  
 Καστορά θ' ἱππόδαμον καὶ πινξ ἀγαθὸν Πολυδεύκεα,  
 αὐτοκασιγνήτω, τῷ μοι μία γείνατο μήτηρ.  
 ἡ οὐχ ἐσπέσθην Λακεδαίμονος ἐξ ἐρατεινῆς,  
 ἡ δεύρω μὲν ἔποντο νέεσσ' ἐνὶ ποντοπόροισιν,  
 νῦν αἶτ' οὐκ ἐθέλουσι μάχην καταδύμεναι ἀνδρῶν,  
 αἴσχρα δειδιότες καὶ ὀνείδεα πόλλ', ἃ μοι ἐστιν.

SECOND PAPER.

WEDNESDAY, 3rd April 1901.—12 NOON to 2 P.M.

*The Candidate must write on his or her books the number of the table at which he or she sits.*

I.—SENTENCES.

1. When Alexander the Great was marching through the country of the Gadrosians, the army endured great sufferings owing to the heat and the scarcity of water.

2. Many of the soldiers fell by the way, overpowered by fatigue, and being unable to overtake their comrades perished in the desert.

3. It was on this expedition that Alexander is said to have performed what many regard as the noblest action of his life.

4. Some of the light-armed had started from the army in quest of water, and finding a small spring they filled a helmet from it and hastened back to offer their general the precious gift.

5. Alexander, though suffering great pain, was leading the army on foot; taking the helmet in his hands he thanked the men who had brought it, but poured the water on the ground before the eyes of all.

6. So inspired were the soldiers at the sight that they marched on as though every man had drunk the water which Alexander had poured away.

II.—GRAMMAR.

1. Conjugate *πετάννμι, κλέπτω, ἔλκω, ὀρίσσω, σφάλλω, πωλῶ, δύω, χέω.*

2. Write the Infinitive Perfect Middle or Passive of *σπείρω, ἀλλάσσω, ὀρώ, τείνω.* Distinguish *ἦν, ἱγ; ἐφῆ, ἔφη.* Parse *εἶσο.*

3. Distinguish *ροσεῖν, ροσῆσαι; τιμωρῶ σοι, τιμωροῦμαι σε; ἐπίσταμαι ὀρᾶν, ἐπίσταμαι ὀρῶν.* Translate: *εἶλω ἀσεβείας; φεύγειν φόνον; φεύγειν ὑπὸ τοῦ δήμου; ὅσον οὐκ ἀπώλετο.*

## 4. Translate and remark on the syntax of—

- (1) οὐχ ὅτι ἔφυγεν ἀλλ' ἐνίκησεν.  
 (2) οὐκ ἔφη αὐτὸς ἀλλ' ἐκείνον στρατηγεῖν.  
 (3) αἰσχροὺς μὴ οὐ προθυμεῖσθαι.  
 (4) ἐρωτᾷ εἰ οὐκ αἰσχύνομαι τοιαῦτα δρῶν.  
 (5) εὐδαιμονίζω σε τοῦ τρόπου.

## 5. Write in the direct form:—

- (a) (ἀπεκρίνατο ὅτι) μανθάνοιεν ἃ οὐκ ἐπίσταντο.  
 (b) (ἀπεκρίνατο ὅτι) μανθάνοιεν ἃ μὴ ἐπίσταντο.

## LOWER STANDARD.

SATURDAY, 29th September 1900.—3 to 6 P.M.

## I. Translate:—

*Alexander's Message to Darius.*

Ἐπεὶ οὖν μάχῃ νενίκηκα, πρότερον μὲν τοὺς σοὺς στρατηγοὺς καὶ σατράπας, ἵν' δὲ καὶ σε καὶ τὴν μετὰ σου δύναμιν, τὴν σὴν χώραν ἔχω, τῶν θεῶν μοι δόντων· ὅσοι δὲ τῶν μετὰ σου παραταξαμένων μὴ ἐν τῇ μάχῃ ἀπέθανον, ἀλλὰ παρ' ἐμὲ κατέφυγον, τοιούτων ἐπιμέλομαι, καὶ οὐκ ἄκοιτες παρ' ἐμοῖ εἰσι, ἀλλὰ καὶ αὐτοὶ ἐκόντες συστρατεῖν μετ' ἐμοῦ. ὥς οὖν ἐμοῦ τῆς Ἀσίας ὑπάσης κυρίου ὄντος, ἦκε πρὸς ἐμέ· εἰ δὲ φοβῇ μὴ ἐλθὼν παθῆς τι ἐξ ἐμοῦ, πέμπε τῶν φίλων τινὰς τὰ πιστὰ ληψομένους· καὶ εἴ τι ἄλλο θέλεις, αἴτει καὶ λαμβάνου· ὅ, τι γὰρ ἂν πείθῃς ἐμέ, ἔσται σοι. καὶ τὸ λοιπὸν ὅταν πέμπῃς παρ' ἐμέ, ὥς πρὸς βασιλέα τῆς Ἀσίας πέμπε· μηδὲ ἐξ ἴσου ἐπίστελλε, ἀλλ' ὥς τῷ κυρίῳ ὄντι πάντων τῶν σῶν· εἰ δὲ μὴ, ἐγὼ βουλευέσομαι περὶ σοῦ ὥς ἀδικούντος.

## II. GRAMMAR.

1. Give the (1) gender, (2) meaning, (3) accusative singular, (4) dative plural of εἰκῶν, ἥρως, λεῶς, οἷς, οῖς, τριήρης, χειμών, νύξ.

2. Give the (1) accusative singular, (2) dative plural, all

genders, of ὅστις, χαρίεις, τιθείς. ἐκών, σώφρων; and the Greek for 20, 20th, 20 times.

3. Compare ἀνδρὺς, ἄφρων, εἴρους, παλαιός, πίων, ταχύς.

4. Write the 1st singular future, aorist, and perfect active, and the 1st singular perfect passive, where existing, of ἄγω, βάλλω, δέω (bind), λείπω, τυγχάνω, ὠθῶ.

5. (a) Write the perfect infinitive middle or passive of τάσσω, τρέφω, φαίνω.

(b) The 3rd plural imperfect active of ἔλκω, προφέρω, ὀρώ, ἔημι, ἐμπίπλημι, οἰκοδομῶ.

(c) The aorist infinitive active of αἶρω, ὀρώ, δίδωμι, μένω, ὀμνυμι, φέρω.

6. Distinguish διὰ τοῦτον, διὰ τοῦτο. ὑπὸ γῆς, ὑπὸ τῇ βασιλεῖ, ἡπὸ νύκτα. ἔστησαν ἀνὰ ἑκατόν.

III. Translate into Greek:—

(1) My brother happened to be present.

(2) He punishes whomsoever he sees.

(3) The allies said they would not follow the Athenians as leaders.

(4) If I had not drunk some of this, I should have fallen ill (ροσεῖν).

(5) These ships were captured, men and all.

SATURDAY, 30th March 1901.—3 to 6 P.M.

*The Candidates must write on his or her books the number of the table at which he or she sits.*

I. Translate:—

Λέξαντο δὲ τοὺς τε φρουροὺς τῶν Ἀθηναίων καὶ εἴ τινα ποιεῖ ἄλλον ἔδει Ἀθηναίων. ἀπέπεμψεν εἰς τὰς Ἀθήνας, διδοὺς ἐκεῖσε μόνον πλείωσιν ἀποφάσειαν, ἄλλαθι δ' οὐ, εἰδὼς ὅτι ὅσων ἂν πλείους συλλεγῶσιν εἰς τὸ ἄστυ καὶ τὸν Πειραιᾶ, θάπτον τῶν ἐπιτηδείων ἐνδοξίαν εἶσεσθαι. καταλιπὼν δὲ Βυζαντίον καὶ Καρχηδόνα Σθερέ-

λαον ἁρμυστήν Λάκωνα, αὐτὸς ἀποπλείσας εἰς Λάμψακον τὰς ναῦς ἐπεσκεύαζεν.

Ἐν δὲ ταῖς Ἀθήναις τῆς Παράλου ἀφικομένης νυκτὸς ἐλέγετο ἡ ξυμφορά, καὶ ἡ οἰμωγὴ ἐκ τοῦ Πειραιῶς δὲ τῶν μακρῶν τειχῶν εἰς ἄστυ διῆκειν, ὁ ἕτερος τῷ ἑτέρῳ παραγγέλλων· ὥστ' ἐκείνης τῆς νυκτὸς οὐδεὶς ἐκοιμήθη, οὐ μόνον τοὺς ἀπολωλότας πείθοντες, ἀλλὰ πολὺ μᾶλλον ἔτι αὐτοὶ ἑαυτοῖς, πείσεσθαι νομίζοντες οἷα ἐποίησαν Μηλίου τε Λακεδαιμονίων ἀποίκους ὄντας, κρατήσαντες πολιορκίᾳ καὶ Ἰστυαίας καὶ Σκιωναίους καὶ Τορωναίους καὶ Αἰγινήτας καὶ ἄλλους πολλοὺς τῶν Ἑλλήνων.

τῆς Παράλου, one of the Athenian sacred galleys.

## II. GRAMMAR.

1. Give the Genitive Singular of ἰχθύς, πέλεκυς, κόρυς, χάρις, ἐλπίς, πόλις; the Accusative Singular of γίγας, λαμπάς, κρέας, ἔρις, ἀκτίς, ὄρις; the Dative Plural of λιμὴν, μῆν, λέων, χειμῶν, μήτηρ, θήρ.

2. Compare γεραίός, λάλος, ὕσος, σαφῶς, ταχέως. Give the Accusative Singular and Dative Plural in all genders of πρῶτος, σῶς, χαρίεις, λυθείς.

3. Give the Dative Singular and Plural of ὅστις, οὗ, οὐτοσί; Give the Greek for—*Which of two? How large? Of what kind? Eight times, Threefold, Twice as large, Two by two, All the rest.*

4. Conjugate θνήσκω, λαγχάνω, μαρθάνω, πείθω, πίπτω, τρέπω.

5. Give the Greek for—*So far as I am concerned; To be one's own master; As quickly as possible; In a word;* and English for αὐτὸς αὐτοῦ δυνατώτερος; τί παθὼν ταῦτα ποιεῖς;

III. Translate into Greek:—

(1) Do not associate with such men as these.

(2) He sent a messenger to say that he would come whenever it was necessary.

(3) If they had been wise they would have fortified the city before the enemy arrived.



- (4) If any man is to blame for his death it is you.  
 (5) We shall make peace on condition that the city is not destroyed.

## MATHEMATICS--INTERMEDIATE AND HIGHER.

### FIRST PAPER.

THURSDAY, 4th October 1900.—9 to 11 A.M.

*Candidates may obtain FULL marks by doing correctly about two-thirds of this paper; but the Examiners may reject a candidate who shows exceptional weakness in any of the sections A, B, C.*

*The pass mark for Intermediate Candidates is fixed with reference to the total number of marks assigned to questions which fall under the syllabus of the Intermediate Standard; but such candidates will receive credit for any question they may answer.*

*Answers, where work is not shown, will not be awarded marks.*

### A.

1. A  $2\frac{1}{2}$  per cent. stock stands at 75 and a  $3\frac{1}{2}$  per cent. stock at 112. Which is the more profitable investment? If a man invests an equal amount of money in each stock, the difference of income from the two investments being £2, 5s. 10d., what is the amount invested in each?

2. Show that

$$\frac{a+b}{ab+c^2-ac-bc} + \frac{a+c}{ac+b^2-ab-cb} + \frac{b+c}{bc+a^2-ba-ca} = 0.$$

3. Show that

$$(a+b+c)(a+b-c)(a-b+c)(-a+b+c) = 2a^2b^2 + 2a^2c^2 + 2b^2c^2 - a^4 - b^4 - c^4.$$

4. A person purchased a certain number of apples—half at two for a penny and half at three for a penny. They were all sold at five for twopence, and there was a penny lost on the whole transaction. How many apples were bought?

5. Solve the equations

$$(i.) \frac{1}{a+x} + \frac{1}{b+x} = \frac{1}{a-x} + \frac{1}{b-x}.$$

$$(ii.) \frac{x+y}{x-y} + \frac{x-y}{x+y} = \frac{a^2+1}{a}, \quad x^2+y^2=b^2.$$

6. Assuming that the expression

$$x^6 + \frac{1}{x^6} - 6\left(x^4 + \frac{1}{x^4}\right) + 15\left(x^2 + \frac{1}{x^2}\right) - 20$$

is the cube of a rational function of  $x$ , find its cube root.

7. If one of the roots of the equation  $ax^2+bx+c=0$  differs from the other by unity, show that  $b^2+4c=(a+2c)^2$ .

8. If  $a+b:b+c=c+d:d+a$ , show that either  $a=c$ , or  $a+b+c+d=0$ . Verify the results by substitution in the original equation.

## B.

9. Show that in any triangle the square on a side opposite an acute angle is less than the sum of the squares on the sides containing it by twice a certain rectangle. What is the projection of one line on another line? Express the rectangle in the above statement by means of the projection of one line on another.

If the acute angle is two-thirds of a right angle, show that the double rectangle is equal to that contained by the two sides enclosing the given acute angle.

10. If chords of a circle intersect in a fixed point, the rectangle under the segments of each chord is a constant quantity.

Show that the chord perpendicular to the diameter through the fixed point is the shortest of these chords.

11. If the angle supplemental to the vertical angle of a triangle be bisected, show that the segments of the base made by it are proportional to the sides. In which direction must the base be produced to meet the bisector if the sides are unequal?

If the sides of a triangle are 11, 12, 13, what are the lengths of the segments of the base 11?

12. Two straight lines each of which is parallel to a third straight line, the three lines not being all in the same plane, are parallel to each other.

A pyramid stands on a triangular base: show that the lines joining the middle points of two pairs of opposite edges are in one plane, and bisect each other.

### C.

13. Define a *degree* and a *radian*. State the proposition in Euclid which enables us to compare the magnitudes of angles by measuring the lengths of arcs.

How many degrees, minutes and seconds are there in an angle of a regular polygon of 13 sides.

14. If  $\tan A + \cot A = 2$ , show that  $\sin A + \cos A = \sqrt{2}$ .

If  $\sin A + \cos A = -\sqrt{2}$ , in what quadrant must  $A$  be situated?

15. If  $A, B, C$  be the angles of a triangle, show that  

$$\tan A + \tan B + \tan C = \tan A \tan B \tan C.$$

16. If  $A = 6^\circ 36'$  and  $\frac{b}{c} = \frac{3}{7}$ , find  $B$  and  $C$ . Why have they definite values though no side of the triangle is given?

$$\text{Given } \cot 3^\circ 18' = 17.34,$$

$$\cot 8^\circ 12' = 6.936.$$

### SECOND PAPER.

THURSDAY, 4th October 1900.—12 NOON to 2 P.M.

### A.

1. A bill is paid by a cheque of £321, 13s. 4d., the payer having first deducted  $3\frac{1}{2}$  per cent. discount for cash payment.

What would the cheque have amounted to if he had deducted  $4\frac{1}{2}$  per cent. discount?

2. Find the four factors of  $(a^2 - b^2 + c^2 - d^2)^2 - (2ac - 2bd)^2$ ; and find by factorising, the quotient of

$$x^8 - 2a^4x^4 + a^8 \text{ by } x^3 + ax^2 + a^2x + a^3.$$

3. If  $x = b + 2c - 3a$ ,  $y = c + 2a - 3b$ ,  $z = a + 2b - 3c$ , show that  $x^2 + y^2 + z^2 + 2yz + 2zx + 2xy = 0$ .

4. Two passengers who have 450 lb. of luggage between them are charged 3s. 4d. for excess luggage. If one had had the same amount he would have been charged 5s. 5d.: how much luggage is allowed free per passenger, and what is the charge for excess luggage per lb.?

5. Solve the equations

$$(i.) \ x + y + z = a + b + c; \ x + a = y + b = z + c.$$

$$(ii.) \ x^2 + y^2 = 15; \ (x + y) \sqrt{xy} = 2\sqrt{2}.$$

6. If  $a, b, c, d$  are in *continued* proportion, show that

$$a : b = a^2 + b^2 + c^2 : ab + bc + cd.$$

7. Show that the ratio  $a + x : a - x$  is greater or less than that of  $a^2 + x^2 : a^2 - x^2$  as  $a$  is greater or less than  $x$ ,  $a$  and  $x$  being both positive.

## B.

8. Divide a straight line into two parts, so that the square on the greater shall be equal to the rectangle contained by the whole line and the less.

Show that the line which is made up of the original line and the greater of the two parts is divided in the same way; and that, if a straight line be divided in this way, the greater part may be divided in the same way by taking the less part as the greater of its two segments.

9. Show that angles in the same segment of a circle are equal to each other; and, conversely, if two triangles with equal vertical angles stand on the same side of the same base, the two

vertices and the two ends of the base lie on the circumference of the same circle.

On a given straight line construct a triangle of a given area with a given vertical angle.

10. In a given regular polygon inscribe a circle. Show that the inscribed and circumscribed circles have the same centre.

If the radius of the one be half that of the other, how many sides has the regular polygon?

11. Define the ratio which is the duplicate of a given ratio. Show that similar triangles are in the duplicate ratio of their homologous sides.

Show that the two triangles into which the perpendicular on the hypotenuse divides a right-angled triangle, are in the duplicate ratio of the perpendicular to one of the segments of the base.

12. Show that the sum of the plane angles at the vertex of a pyramid is less than four right angles.

Hence show that in any regular polyhedron each solid angle may be enclosed by three, four or five angles of an equilateral triangle, by three angles of a square, by three angles of a regular pentagon, and in no other way.

### C.

13. Find the sine of  $18^\circ$  by finding the ratios between the sides of an isosceles triangle where each of the angles at the base is double of the vertical angle.

Find also the cosine of  $36^\circ$ .

14. From the top of a hill the angles of depression of the tops of two telegraph posts, each 30 feet high and 176 feet apart, which lie in the same vertical plane through the observer's position, are found to be angles whose tangents are  $\cdot 104$  and  $\cdot 32$ . Find the height of the hill.

15. Find all the angles in the first four quadrants which satisfy the equation  $\sin \theta + \cos \theta = \frac{5}{4}$ .

16. Find the cosine of the greatest angle of a triangle, of which the sides are 25, 20 and 17 units of length respectively.

# FIRST PAPER.

THURSDAY, 4th April 1901.—9 to 11 A.M.

## A.

1. A merchant purchases  $2\frac{1}{2}$  cwt. of tea at £13, 1s. 8d. per cwt. and  $1\frac{1}{2}$  cwt. at £18, 2s. He mixes them and sells the mixture at 3s.  $1\frac{1}{2}$ d. per lb. What is the profit per lb. and the profit per cent. on the outlay?

2. What value other than zero must be given to  $a$ , so that  $x^2 - x - a$  and  $x^2 + x - a$  may have a common factor, and what is their highest common factor when  $a$  has this value?

3. Solve  $\frac{x}{a+b} + \frac{y}{a-b} = 2a$ ,  $\frac{x-y}{2ab} = \frac{x+y}{a^2+b^2}$ .

4. Solve  $\sqrt{2x+9} - \sqrt{x-4} = \sqrt{x+1}$ .

5. Solve  $(x-a+2b)^3 - (x-2a+b)^3 = (a+b)^3$ .

6. Solve  $x^2 + xy + x = 14$ ,  
 $y^2 + xy + y = 28$ .

7. A battalion of soldiers formed into a solid square has 12 men fewer in front than when formed into a hollow square 3 deep; what is the number of soldiers?

8. If  $a(y+z) = b(z+x) = c(x+y)$ , show that

$$\frac{y-z}{a(b-c)} = \frac{z-x}{b(c-a)} = \frac{x-y}{c(a-b)},$$

provided that  $a$ ,  $b$  and  $c$  be all unequal and none of them zero.

9. What is the ratio of  $x$  to  $y$  if  $\frac{2x^2 - y^2}{7} = \frac{xy}{15}$ ?

10. If  $a:b=c:d$ , show that  $ab+cd$  is a mean proportional between  $a^2+c^2$  and  $b^2+d^2$ .



### B.

11. Draw a tangent to a circle from a point outside it. Show that there are always two equal tangents.

Draw a common tangent to two unequal circles which intersect.

12. Construct a triangle which is isosceles with the vertical angle half of either base angle.

In the figure show that the smaller circle is equal to the circle circumscribing the triangle.

13. In a right-angled triangle, if a perpendicular be drawn from the right angle on the hypotenuse, the perpendicular is a mean proportional between the segments of the hypotenuse, and each side a mean proportional between the hypotenuse and the segment adjacent to itself.

If  $ABC$  is the right-angled triangle and  $AD$  the perpendicular on the hypotenuse and  $DE$ ,  $DF$  perpendiculars on the sides, show that a circle will pass through  $B$ ,  $C$ ,  $E$ ,  $F$ .

14. If the bisector of the vertical angle of a triangle meet the base, show that the rectangle under the sides enclosing the angle is equal to the rectangle under the segments of the base together with the square on the bisector.

If  $I$  be the centre of the inscribed circle and  $E$  the point where the bisector of the angle  $A$  meets the circum-circle, show that the rectangle  $ALIE$  is equal to the rectangle under the diameter of the circum-circle and the radius of the in circle.

15. If one of four lines which meet in a point is perpendicular to the other three, these three lines lie in one plane.

Show that the curve in which two spheres intersect is a circle.

### C.

16. If  $\theta$  be an angle less than  $90^\circ$  and  $\tan \theta + \sec \theta = 1.5$ , find  $\sin \theta$ , and verify the given equation.

17. The angle of elevation of the top of a tower is observed

to be  $60^\circ$ , and from the top of a wall 30 feet above the first point of observation it is  $45^\circ$ , find the height of the tower and its horizontal distance from the first point of observation—given  $\sqrt{3}=1.732$ .

18. Show that in any triangle  $ABC$   $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C} = 2R$ ,  $R$  being the radius of the circum-circle.

19. Given  $a=25$ ,  $b=24$ ,  $A=72^\circ 5'$ , find the angles  $B$  and  $C$  from the following data:  $\log 2=.3010$ ,  $\log 3=.4771$ .

$\text{Log sin } 72^\circ 5' = 9.9784$ .  $\text{Log sin } 65^\circ 57' = 9.9605$ .

Is there any ambiguity about these angles?

## SECOND PAPER.

THURSDAY, 4th April 1901.—12 NOON to 2 P.M.

### A.

1. If  $\frac{37}{10}$ ths of 1 oz. troy of silver cost  $29\frac{7}{8}$ d., find the number correct to 4 figures) of grammes a florin should weigh if  $\frac{9}{10}$ ths of its weight be pure silver, given 1 gramme = 15.432 grains.

2. Simplify

$$\frac{(x-b)(x-c)}{a^2+bc-ab-ac} + \frac{(x-c)(x-a)}{b^2+ac-ab-bc} + \frac{(x-a)(x-b)}{c^2+ab-ac-bc}.$$

Factorise  $6x^2+3xy-18y^2+14x+42y-12$ .

3. Prove that the remainder when  $3x^5-7x^3-23$  is divided by  $x-2$  is the same as the remainder when  $48x^4+20x^2-18x$  is divided by  $2x+1$ .

4. A passenger from London to Edinburgh gets 100 lbs. of luggage free and from Edinburgh to London 60 lbs. free. His excess charges are 1s. one way and 4s. 4d. the other. Find the amount of his luggage and the rate charged, the rate per lb. for excess being the same either way.

5. If  $\alpha$  and  $\beta$  are the roots of  $ax^2+bx+c=0$ , find the value of  $\alpha+\beta$ , and the relation between  $a$ ,  $b$  and  $c$  if  $\alpha=2\beta+1$ .

6. Find  $a, b, c$  so that  $2x^2 - 10x + 2$  may be identically equal to  $(ax+b)(x-3)+c(x^2+2x+5)$ .

7. Solve

$$5x - 3y = 2xy, \quad 2yz + 4zx + 6xy = 9xyz, \quad \frac{2}{x} + \frac{1}{z} = \frac{5}{2y}.$$

## B.

8. If two triangles of equal area are on opposite sides of the same base, shew that the line joining their vertices is bisected by the base.

$ABC$  is a triangle,  $DE$  is parallel to  $BC$  and meets  $AB$  and  $AC$  in  $D$  and  $E$  respectively. If  $AF$  bisects  $BC$ , prove that it also bisects  $DE$ .

9. If a straight line is bisected and divided unequally at any point, the sum of the squares on the two unequal parts is equal to twice the sum of the squares on half the line and on the line between the points of section.

$ABCDE$  is a straight line,  $F$  is the mid-point of  $AB$ ,  $G$  of  $CD$ , and  $H$  of  $FG$ . Prove that the sum of the squares on  $AE$ ,  $BE$ ,  $CE$ ,  $DE$  is equal to the sum of the squares on  $AH$ ,  $BH$ ,  $CH$ ,  $DH$  together with four times the square on  $EH$ .

10. If a chord of a circle be drawn from the point of contact of a tangent, the angles made by the chord and tangent are equal to the angles in the alternate segments made by the chord.

If two circles have internal contact and a chord of the larger touch the inner, prove that the segments of the chord made by its point of contact subtend equal angles at the common point of the two circles.

11. If two triangles have one angle of the one equal to one angle of the other, and the sides about one other angle in each proportional, so that the sides opposite the equal angles are homologous, the triangles have their third angles either equal

or supplementary; and in the former case the triangles are similar.

$ABC$  is a triangle, and the straight line  $DFE$  cuts  $AB$ ,  $BC$ ,  $CA$  in  $D$ ,  $F$ , and  $E$  respectively, so that  $DB : CE = BF : FC$ . Prove that  $DAE$  is an isosceles triangle.

12. Straight lines which are perpendicular to the same plane are parallel.

$AB$  and  $CD$  are perpendicular to a plane  $BDE$ . The plane through  $C$  perpendicular to  $AC$  meets the plane  $BDE$  in  $EF$ . Prove that  $EF$  is perpendicular to  $BD$ .

### C.

13. The moon's diameter subtends an angle of  $30'$  at the eye. How far away from the eye must a circular disk 1 foot in diameter be placed so as just to hide the moon? [ $\pi = 3.1416$ .]

14. Define the secant of an angle of any magnitude, and express it in terms of the cotangent.

Prove 
$$\frac{\tan A}{\tan A - \tan B} = \frac{\cot B}{\cot B - \cot A}.$$

15. Prove  $\tan(180^\circ - A) = -\tan A$ .

With the help of tables find the general solution of

$$3 \sin x + 4 \cos x = 5.$$

16. If  $A$ ,  $B$ ,  $C$  be the angles of a triangle, prove

$$\begin{aligned} \sin(B+C-A) - \sin(C+A-B) + \sin(A+B-C) \\ = 4 \cos A \sin B \cos C. \end{aligned}$$

LOWER STANDARD.

MONDAY, 1st October 1900.—2 to 5 P.M.

*Candidates may obtain FULL marks by doing about two-thirds of this paper. But the Examiners may reject a Candidate who shows exceptional weakness in any of the sections A, B, C.*

*Answers, where work is not shown, will not be awarded marks.*

A.

1. Find the value, correct to the fourth place of decimals, of

$$\left(3\frac{1}{4} \text{ of } 1\frac{7}{15}\right) + \frac{9}{7} - \frac{1}{4} \left(2\frac{2}{3} - 4\frac{4}{5}\right) + \frac{6\frac{3}{4} \text{ of } 9\frac{1}{3}}{7\frac{7}{8} \text{ of } \frac{7}{10}}.$$

2. From 8 yds. 2 ft. subtract  $\cdot 0015$  of a mile,  $\cdot 0173$  of a furlong, and  $\cdot 051$  of a pole, expressing the answer in inches and decimals of an inch.

3. A drug is bought wholesale at  $1\frac{3}{4}$ d. per oz. Avoirdupois and retailed at 3d. per oz. Troy. What is the percentage gain on the cost price? (1 lb. Avoir. = 7000 grains; 1 lb. Troy = 5760 grains.)

4. What sum of money will amount to £2460, ss. in 12 years at 5 per cent. simple interest?

5. Explain the rule for finding the square root of a number.

A square room has an area of 30 square yards. Find to the nearest inch the length of linoleum 2 ft.  $1\frac{1}{2}$  in. wide required to form a border round the room.

B.

6. Explain the principle upon which is based the ordinary rule for finding the H.C.F. of two algebraic expressions.

Find the H.C.F. of  $1+a^2-5a^3-9a^5$

and  $1+2a^2+2a^3+13a^4+6a^5$ .

7. Simplify

$$(i.) \frac{1}{x^2+xy+y^2} + \frac{1}{x^2-xy+y^2} - \frac{2(x^2+y^2)}{x^4+x^2y^2+y^4}.$$

$$(ii.) \frac{a}{bc(a-b)(a-c)} + \frac{b}{ca(b-c)(b-a)} + \frac{c}{ab(c-a)(c-b)}.$$

8. Factorise

$$(i.) (x+y+z)^2 - x^2 - y^2 - z^2.$$

$$(ii.) (4x+1)(2-x) - 1 - 2(2x-1)^2 - 4(x-4).$$

9. Solve

$$(i.) \frac{x}{4a} = \frac{(4a+1)x}{4a(2a+1)^2} + \frac{4a}{(2a+1)^3}.$$

$$(ii.) ax - by = 2ab, 2bx + 2ay = 3b^2 - a^2.$$

10. Solve

$$(i.) 2x(x+2) = (x+6)(x+8).$$

$$(ii.) 2xy + y^2 = 8 = 3y + 2x.$$

11. A man can pay his hotel bill with half-sovereigns and florins in the ratio of 3 to 1. He gives instead a cheque for £9, 12s., and gets back the same number of coins, also half-sovereigns and florins, but in the ratio of 1 to 3, as he required to pay the bill. Find the numbers of the coins and the amount of the bill.

### C.

12. Prove that the complements of the parallelograms about the diagonal of a parallelogram are equal.

Prove that the non-coincident diagonals of the parallelograms about the diagonal are parallel.

13. Prove that the square on the hypotenuse of a right-angled triangle is equal to the sum of the squares on the other sides.

If  $ABC$  be any triangle,  $ABDE$  and  $BCFG$  squares described externally to the triangle, prove that  $AG$  and  $CD$  cut at right angles.

14. If a straight line be divided into any two parts, the sum of the squares on the whole line and one of the parts is equal to twice the rectangle under the whole and that part together with the square on the other part.



$ABCD$  is a square and  $BD$  is produced to  $E$ , so that  $DE=AB$ . Prove that the square on  $AE$  is equal to the rectangle under  $BE$  and  $BD$ .

15. If from a given point  $A$ , without or within the circumference of a circle,  $AP$  be drawn to the circumference, prove that  $AP$  is longest when it passes through the centre, and that, of any two such lines  $AP$  and  $AP'$ , the shorter subtends the smaller angle at the centre.

If  $AP$  meet the circumference again in  $Q$ , and  $M$  be the mid-point of  $PQ$ , find the locus of  $M$ .

16. The angle in any segment of a circle is greater than, equal to, or less than a right angle according as the segment is less than, equal to, or greater than a semi-circle.

A rod of given length slides with its two ends on two rods at right angles to each other. Find the locus described by its middle point.

MONDAY, 1st April 1901.—2 to 5 P.M.

A.

1. Reduce to its simplest form

$$\frac{2\frac{1}{8} \text{ of } \frac{4}{33} \text{ of } 14\frac{1}{7}}{\frac{5}{23} \text{ of } 7\frac{2}{7} \text{ of } 1\frac{8}{15}} \div \frac{7\frac{1}{2}}{1 - \frac{2}{3} \text{ of } \frac{1}{2}}.$$

2. Divide 720 into three parts so that four times the first part, five times the second part, and six times the third part shall all be equal.

3. Find the cost of papering the walls of a room 121 feet long by 29 feet wide, by 12 feet high, with a paper which is 18 inches broad, when a roll of paper 12 yards long costs 3s. 1½d.

4. If 3 per cent. of a company's capital is £75, and if the whole capital is 714285 of the combined capitals of three

other companies whose capitals are in the ratios to each other of the numbers 3, 5, and 7, find the capitals of all the four companies.

5. What sum of money must be lent for  $5\frac{1}{4}$  years at  $2\frac{1}{2}$  per cent. simple interest, so that it amounts at the end of the time to £814, 10s.?

6. Assuming that the square on the hypotenuse of a right-angled triangle is equal to the sum of the squares on the sides, find the second side to three places of decimals, if the hypotenuse is 31 inches, and the first side 30 inches.

## B.

7. A father's age is four times that of his eldest son and five times that of his youngest. When the eldest son has lived to three times his present age, the father's age will exceed twice that of his youngest son by three years. Find their present ages.

8. Find the factors of

$$(1) (bc+ca+ab)^2 - (b^2c^2 + c^2a^2 + a^2b^2).$$

$$(2) (a+2b)a^3 - (b-2a)b^3.$$

9. Simplify

$$(1) \frac{a^2 - (b-c)^2}{(a+b)^2 - c^2} + \frac{b^2 - (c-a)^2}{(b+c)^2 - a^2} + \frac{c^2 - (a-b)^2}{(c+a)^2 - b^2}.$$

$$(2) \frac{a+b}{ab+c^2-ac-bc} + \frac{a+c}{ac+b^2-ab-bc} + \frac{b+c}{bc+a^2-ab-ac}.$$

10. Solve

$$(1) \frac{x^2 - 6x + 10}{x^2 + 8x + 17} - \frac{(x-3)^2}{(x+4)^2} = 0.$$

$$(2) \sqrt{x-a} + \sqrt{x-b} = \sqrt{a-b}.$$

11. Find the two times between 7 and 8 o'clock when the hour and minute hands are separated by 15 minutes.

12. Arrange in powers of  $x$   $\left(\frac{x^2}{a^2} + \frac{a^2}{x^2} - \frac{x}{a} - \frac{a}{x} + 1\right)\left(\frac{x}{a} - \frac{a}{x}\right).$

13. Solve  $\frac{x}{a} + \frac{y}{b} + \frac{z}{c} = 1.$

$$\frac{x}{a} + \frac{y}{c} + \frac{z}{b} = 1.$$

$$\frac{x}{b} + \frac{y}{a} + \frac{z}{c} = 1.$$

C.

14. If from the ends of the base of a triangle straight lines be drawn to a point inside it, show that their sum is less than the sum of the two sides but that they include a greater angle.

If two triangles on the same side of the same base have equal vertical angles, each vertex lies outside the other triangle.

15. If the square described on one of the sides of a triangle is equal to the squares described on the other two sides, prove that the angle contained by these two sides is a right angle.

Show how to divide a straight line into two parts so that the sum of the squares on the parts shall be equal to the square on a given line.

16. In an obtuse-angled triangle the square on the side opposite to the obtuse angle exceeds the sum of the squares on the other two sides, by twice the rectangle on either of these sides, and the part of its production from the obtuse angle to the foot of the perpendicular on it from the opposite angle.

In the isosceles triangle  $ABC$ ,  $AB=AC$ , and  $AB$  is produced beyond the base till  $BD=BA$ , show that  $CD^2=AB^2+2BC^2$ .

17. The greater of two unequal chords of a circle is nearer the centre than the less.

Show that it subtends at the centre a greater angle than the less.

18. On a given finite straight line as chord describe a segment of a circle which shall contain an angle equal to a given angle.

The triangle  $ABC$  has within it a point  $O$  such that the

angles  $AOB$ ,  $BOC$ ,  $COA$  are all equal. Give a construction to find the point.

## FRENCH.

### FIRST PAPER.

TUESDAY, 2nd October 1900.—3 to 4.30 P.M.

Translate into French :—

(a) The king was so dull and feeble that he could not live without some one to act for him, and yet he was sure to chafe against any one who had the mastery over him. For a few years there was a struggle between Mary de Medici and the Prince of Condé, till at last the power was grasped by the far stronger hands of Armand Duplessis de Richelieu. This man, who was then Bishop of Luçon, and had been lately created a cardinal, was the ablest statesman in Europe. His force of character made him as powerful as any despotic monarch, and he wielded his might for the aggrandisement of his country abroad, and for the increase of the royal power at home. All his vast abilities were devoted to enlarging the power of the French crown, while he made its actual wearer one of his most obedient servants, not out of love, but out of fear and helplessness. Lewis was quite untainted with the usual royal vices; he was religious and conscientious, and failed only from want of capacity and sluggishness of feeling which made him hard and dull.

- (b) 1. The building of this town lasted ten years.  
 2. You should not have done that.  
 3. I was not expecting it.  
 4. He is the son of the gentleman whose brother I saw yesterday.  
 5. Do you think we shall have fine weather?

SECOND PAPER.

THURSDAY, 4th October 1900.—3 to 5 P.M.

I. Translate into English:—

(a) Depuis un moment un bruit sourd et continu semblait annoncer le voisinage d'une chute d'eau, quand la vallée se resserra tout à coup et prit l'aspect d'une gorge retirée et sauvage. A gauche se dressait une haute muraille de roches plaquées de mousse; des chênes et des sapins, entremêlés de lierre et de broussailles pendantes, s'étageaient dans les crevasses jusqu'au faite de la falaise, jetant une ombre mystérieuse sur l'eau plus profonde qui baignait le pied des rochers. Devant nous, à quelques centaines de pas, l'onde bouillonnait, écumait; puis disparaissait soudain, la ligne brisée de la rivière se dessinant à travers une fumée blanchâtre sur un fond lointain de confuse verdure. A notre droite, la rive opposée à la falaise ne présentait plus qu'une faible marge de prairie en pente sur laquelle les collines chargées de bois marquaient une frange de velours sombre. Nous arrivâmes enfin dans une clairière très étroite qui paraît couronner le sommet de cette colline; là j'aperçus, non sans émotion, une sombre et monstrueuse table de pierre soutenue par cinq ou six blocs énormes, qui sont à demi engagés dans le sol et y forment une caverne vraiment pleine d'une horreur sacrée.—OCTAVE FEUILLET.

(b) Le soleil déclinait; le soir prompt à le suivre  
Brunissait l'horizon; sur la pierre d'un champ  
Un vieillard qui n'a plus que peu de temps à vivre,  
S'était assis pensif, tourné vers le couchant.

C'était un vieux pasteur, berger dans la montagne  
Qui jadis, jeune et pauvre, heureux, libre et sans lois,  
A l'heure où le mont fuit sous l'ombre qui le gagne,  
Faisait gaîment chanter sa flûte dans les bois.

Maintenant riche et vieux l'âme du passé pleine,  
 D'une grande famille aïeul laborieux,  
 Tandis que ses troupeaux revenaient de la plaine,  
 Détaché de la terre, il contemplait les cieux.  
 Le jour qui va finir vaut le jour qui commence.  
 Le vieux pasteur rêvait sous cet azur si beau,  
 L'océan devant lui se prolongeait immense,  
 Comme l'espoir du juste aux portes du tombeau.  
 O moment solennel ! les monts, la mer farouche,  
 Les vents faisaient silence et cessaient leur clameur.  
 Le vieillard regardait le soleil qui se couche ;  
 Le soleil regardait le vieillard qui se meurt.

VICTOR HUGO.

## II. GRAMMAR.

1. Construct short sentences in French illustrative of the use and meaning of each of the following words and phrases : *depuis*, *depuis que*, *puisque*, *sans que*, *à moins que*. Give the English translation of the sentences.

2. Explain the difference between—*meurtrir* and *to murder*, *prévenir* and *to prevent*, *propre* and *proper*, *ingénuité* and *ingenuity*, *altérer* and *to alter*.

3. Translate and explain the following sentences illustrative of the use of the indicative as compared with the subjunctive mood :—

Il prétend que tout se fait par lui—Il prétend que tout se fasse par lui.

Je cherche un domestique qui me convienne—Je cherche le chien qui s'est sauvé ce matin.

Je ne savais pas que vous étiez amis—Je ne savais pas que vous fussiez amis.

4. In the following sentences correct any errors you may



find with regard to the concord of the verb with the subject and state your reasons for so doing:—

- (a) La plupart était d'un autre avis.
- (b) Le calme, le sang-froid de cet homme est remarquable.
- (c) Ni votre frère ni votre cousin n'obtiendront le prix.
- (d) La mémoire, plus peut-être que les autres facultés, se perd faute d'exercice.
- (e) Une foule de voitures arrêtait la circulation.

### III. PHILOLOGY AND LITERATURE.

(Only ONE question to be attempted.)

1. Explain the origin of the affix "ment" which is used in the formation of adverbs from adjectives. Illustrate by means of examples, including such words as *constamment* and *prudemment*.
2. Show fully how the Latin *habeo* has entered into the composition of the tenses of French verbs.
3. Give a sketch of the Encyclopédie: its principal contributors, its aims and its influence.
4. Appreciate Voltaire as an historian or as a tragic poet.

#### FIRST PAPER.

TUESDAY, 2nd April 1901.—3 to 4.30 P.M.

*The Candidate must write on his or her books the number of the table at which he or she sits.*

Translate into French:—

1. It would be an extremely profitable thing to draw up a short and well-authenticated account of the habits of study of the most celebrated writers of whose style of literary industry we happen to be most acquainted. It would go very far to destroy the absurd and pernicious association of genius and idleness, by showing men that the greatest poets, orators, states-

men, and historians—men of the most brilliant and imposing talents—have actually laboured as hard as the makers of dictionaries and the arrangers of indices, and that the most obvious reason why they have been superior to other men is that they have taken more pains than other men.

Burke was the most laborious and indefatigable of human beings; Leibnitz was never out of his library; Pascal killed himself with study; Cicero narrowly escaped death by the same cause; Milton was at his books with as much regularity as a merchant or an attorney—he had mastered all the knowledge of his time; so had Homer.

SIDNEY SMITH.

2. (1) To read without reflecting, is like eating without digesting.

ED. BURKE.

(2) *A reason for calling.*—Visitor (naively): Well, I certainly never dreamt I should find you at home on such a lovely afternoon as this!

*Punch.*

(3) Mr. Rector, I beg your leave to stay at home to-morrow.

## SECOND PAPER.

THURSDAY, 4th April 1901.—3 to 5 P.M.

*The Candidate must write on his or her books the number of the table at which he or she sits.*

### I.

Translate into English:—

(a) Si j'étais riche, je n'irais pas me bâtir une ville en campagne et mettre au fond d'une province les Tuileries devant mon appartement. Sur le penchant de quelque agréable colline bien ombragée, j'aurais une petite maison rustique, une maison blanche avec des contrevents verts; et, quoique une couverture de chaume soit en toute saison la meilleure, je préférerais magnifiquement, non la triste ardoise, mais la tuile, parce qu'elle a l'air plus propre et plus gaie que le chaume, qu'on ne couvre pas

autrement les maisons dans mon pays, et que cela me rappellerait un peu l'heureux temps de ma jeunesse.

J'aurais pour cour une basse-cour, et pour écurie une étable avec des vaches, pour avoir du laitage que j'aime beaucoup. J'aurais un potager pour jardin, et pour pare un joli verger. Les fruits, à la discrétion des promeneurs, ne seraient ni comptés ni cueillis par mon jardinier, et mon avare magnificence n'étalerait point aux yeux des espaliers superbes auxquels à peine on osât toucher.

J. J. ROUSSEAU (*Emile*).

(b) Une grenouille vit un bœuf

Qui lui sembla de belle taille.

Elle, qui n'était pas grosse en tout comme un œuf,

Envieuse, s'étend, et s'enfle, et se travaille,

Pour égaler l'animal en grosseur,

Disant : "Regardez bien, ma sœur ;

Est-ce assez ? dites-moi ; n'y suis-je point encore ?

—Nenni.—M'y voici donc !—Point du tout.—M'y voilà !

—Vous n'en approchez point . . . La chétive péclore

S'enfla si bien qu'elle creva.

LA FONTAINE, *Fables*, Livre I.

## II. GRAMMAR.

1. State the difference in meaning between :

*tenir à*, and *tenir de*.

*toucher*, and *toucher à*.

*garder*, and *se garder de*.

*servir de*, and *se servir de*.

*vouloir*, and *en vouloir à*.

*attendre*, and *s'attendre à*.

2. Point out some of the uses of the French preposition *de*. Give examples of French sentences in which *de* is to be translated into English by :—*of*, *from*, *by*, *with*, *about*, *for*, *on*.

3. Re-write the above French verse text for translation, using

the plural: *Des grenouilles*, instead of the singular: *Une grenouille*, and making all other necessary alterations throughout the fable.

### III. PHILOLOGY AND LITERATURE.

(Only ONE question to be attempted.)

1. Describe the *character* of Hernani, or that of Ruy Blas, or that of Chatterton.
2. What is the *subject-matter* of any *one* of the following works :—

De l'Allemagne.

Le Génie du Christianisme.

Jocelyn.

Notre-Dame de Paris.

François le Champi.

Eugénie Grandet.

Colomba.

3. Draw a parallel between Mignet, Guizot, Thiers, and Michelet as historians.
4. What were the sources of the French vocabulary?
5. Name all the French words that you know being derived from the same root as: *lait, fleur, poser, mouvoir*.

### GERMAN.—FIRST PAPER.

WEDNESDAY, 3rd October 1900.—3 to 4.30 o'clock.

*The Candidate may use either English or German script.*

Translate into German :—

(a) All this time sat upon the edge of the deck quite a different character. It was a lad, apparently very poor, very infirm, and very patient. His eye was ever on the sea, with a smile; and, if he caught now and then some snatches of these wild legends, it was by accident, and they seemed not to

concern him. The waves to him whispered more pleasant stories. He was as one being with us, but not of us. He heard the bell of dinner ring without stirring; and when some of us pulled out our private stores—our cold meat and our salads—he produced none and seemed to want none. Only a solitary biscuit he had laid in; provision for the one or two days and nights, to which these vessels then were oftentimes obliged to prolong their voyage. Upon a nearer acquaintance with him he seemed neither to court nor decline, we learned that he was going to Margate with the hope of being admitted into the infirmary there for sea-bathing.—LAMB'S *Eliu*.

- (*h*) (1) As he had broken his leg, he had to lie on the ground until his friend had brought help.
- (2) I consider running to be far too violent an exercise.
- (3) He succeeded in effecting his purpose.
- (4) You have no objections, I suppose, to my accompanying you home.
- (5) You ought not to have punished him so severely.

## SECOND PAPER.

FRIDAY, 5th October 1900.—9 to 11 A.M.

### I. Translate into English:—

(*a*) Wer hat aber dieses Lied verfaßt? Ebenso wenig wie von den Volksliedern weiß man den Namen des Dichters, der das Nibelungenlied geschrieben. Sonderbar! von den vortrefflichsten Büchern, Gedichten, Bauwerken und sonstigen Denkmälern der Kunst weiß man selten den Urheber. Wie hieß der Baumeister, der den Kölner Dom erdacht? Wer hat dort das Altarbild gemalt, worauf die schöne Gottesmutter und die heiligen drei Könige so erquicklich abkonterfeit sind? Wer hat das Buch Hiob gedichtet, das so viele leidende Menschengeschlechter getröstet hat? Die Menschen vergessen nur zu leicht die Namen ihrer Wohlthäter; die Namen des Guten

und Edlen, der für das Heil seiner Mitbürger gesorgt, finden wir selten im Munde der Völker, und ihr dickes Gedächtnis bewahrt nur die Namen ihrer Dränger und grausamen Kriegshelden. Der Baum der Menschheit vergißt des stillen Gärtners, der ihn gepflegt in der Kälte, getränkt in der Dürre und vor schädlichen Tieren geschützt hat; aber er bewahrt treulich die Namen, die man ihm in seine Rinde unbarmherzig eingeschnitten mit scharfem Stahl, und er überliefert sie in immer wachsender Größe den spätesten Geschlechtern.

HEINE.

(b) Die müde Sonne ist hinabgegangen,  
 Der Abendchein am Horizont zerrinnt,  
 Doch du, O Freiheit, spielst um meine Wangen;  
 Stiegst du hernieder mit dem Abendwind?  
 Nach dir, nach dir ringt heißer mein Verlangen,  
 Ich fühl's, du schwebst um mich, so mild, so lind.  
 O weile hier, wirf ab die Adlerflügel!  
 Du schweigst? Du meidest ewig Deutschlands Hügel?  
 Wohl lange ist's, seit du so gerne wohntest  
 Bei unsern Ahnen in dem düstern Hain:  
 Dünkt dir, wie gern du auf den Bergen throntest  
 Vom eis'gen Best bis an den alten Rhein?  
 Mit Eichenfränzen deine Söhne lohtest?  
 Das schöne Land soll ganz vergessen sein?  
 Noch denkst du sein; es wird dich wiedersehen,  
 Wird auch dein Geist dann längst mein Grab umwehen.

HAUFF.

## II. GRAMMAR.

1. How are the expressions (a) *both*, (b) *both . . . and*, (c) *neither . . . nor*, rendered in German? Illustrate by German sentences.

2. Distinguish between (a) *bitten*, *bieten*, *beten*; (b) *beständig*, *verständlich*; (c) *verlassen*, *entlassen*; (d) *besprechen*, *versprechen*, *entsprechen*; (e) *mündlich*, *mündig*.



3. Show by German sentences the difference in meaning between *als*, *wenn*, *wann*, *ob* and *da*.

4. Write the third person singular of the present indicative and the imperfect and perfect subjunctive of *anerkennen*, *empfangen*, *abgeschrieben*, *vorbehalten*, *bekommen*.

### III. PHILOLOGY AND LITERATURE.

(Only ONE question to be attempted.)

1. Explain historically the meaning of *Schmetterling*, *Starfreitag*, *Sagestolz*, *Junfer*, *bieder*, *Apothefe*.

2. Give the German etymological equivalents of *shell*, *banner*, *hart*, *stout*, *rim*, *point*, *vat*.

3. What influence had Schiller upon the literary life of Goethe?

4. Write a short account of the life and works of Körner.

#### FIRST PAPER.

WEDNESDAY, 3rd April 1901.—3 to 4.30 P.M.

Translate into German :—

(a) King Pheres being especially fond of beholding beauty, ordered a statue to be made of white stone. In order to adorn it still more, the artist was to carve the hair of its head out of gold; and that the people might not dare to break into the shrine by night and steal away the gold, Pheres ordered that it should be proclaimed that whoever took away even a toe of the statue should be put to death. But a certain man despising the king's orders, on the second night after the statue was put up, secretly stabbed the guards and went off with the golden hair. Being caught, however, he pleaded that it was not right he should be put to death. For he had but been in to look at the marble maiden, but seeing her gold hair he bethought himself of the sculptor, whose hair was red. But since it was not just

that the work should be grander than the workman, he thought it necessary to remove the hair.

- (b) 1. I do not know what has come over you that you look so gloomy to-day.  
 2. Though I suffer much I am not allowed to complain.  
 3. Beware of promising what you would be unable to perform.  
 4. You seem to me to be quite at a loss what to say.  
 5. I know that if you were in my place you would do the same as I am doing.

## SECOND PAPER.

FRIDAY, 5th April 1901.—9 to 11 A.M.

### I. Translate into English:—

(a) Von solchem Standpunkt verläuft das Leben einer Nation in einer unaufhörlichen Wechselwirkung des Ganzen auf den Einzelnen und des Mannes auf das Ganze. Jedes Menschenleben, auch das kleine, giebt einen Teil seines Inhalts ab an die Nation, in jedem Manne lebt ein Teil der schöpferischen Gesamtkraft, er trägt Seele und Leib aus einer Generation in die andere, er bildet die Sprache fort, er bewahrt das Rechtsbewußtsein, alle Resultate seiner Arbeit kommen dem Ganzen wie ihm selbst zu gute. Millionen leben so, daß der Inhalt ihres Daseins still und unbemerktbar mit dem großen Ströme zusammenrinnt. Nach allen Richtungen aber entwickeln sich aus der Menge bedeutende Persönlichkeiten, die als gestaltende größeren Einfluß auf das Ganze gewinnen. Zuweilen erhebt sich eine gewaltige Menschenkraft, welche in großen Gebieten auf eine Zeit lang das übermenschliche Leben des Volkes beherrscht und einer ganzen Zeit das Gepräge eines einzelnen Geistes aufdrückt.

GUSTAV FREYTAG.

(b)

### Der Schiffbruch.

Mitten in des Weltmeers wilden Wellen  
Scheiterte das Schiff. Die Edlen retten  
Sich im Fahrzeug. „Wo ist Don Alonso?“  
Riefen sie. Er war des Schiffes Priester.  
„Reiset wohl, ihr Freude meines Lebens,  
Bruder, Oheim,“ sprach er von dem Borde,  
„Meine Pflicht beginnt, die eure endet.“  
Und er eilt hinunter in des Schiffes  
Kammern, seine Sterbenden zu trösten,  
Höret ihre Sünden, ihre Buße,  
Ihr Gebet und wehret der Verzweiflung,  
Labet sie und geht mit ihnen unter.  
Welch ein Geist war größer? Jenes Cato,  
Der im Borne sich die Wunden aufriß,  
Oder dieses Priesters, der, den Pflichten  
Seines Amtes treu, im Meer ersinket?

JOHANN GOTTFRIED VON HERDER.

## II. GRAMMAR.

1. What are the cases governed by: - erwähnen, entnehmen, befolgen, folgen, sich rühmen.
2. Translate these idioms:—
  - (a) Das läßt sich nicht läugnen.
  - (b) Einen zum Besten haben.
  - (c) Wie es sich trifft.
  - (d) In's Blaue hinein reden.
  - (e) Es geht nicht mit rechten Dingen zu.
3. Parse:—Büte, bete, bäte, genas, genoß, läge, lüge, zöge, betrog, betrug.
4. Distinguish:—Der Hut, die Hut; der Leiter, die Leiter; der Verdienst, das Verdienst; der Kunde, die Kunde.

### III. PHILOLOGY AND LITERATURE.

*Only ONE question to be attempted.*

1. Give one English word cognate with each of the following German words:—*Bug, Zeit, wissen, werden, schlagen, tapfer, gleich, zählen, Mädchen, Knabe.*

2. From what verbs are the following nouns derived:—*Fluß, Bucht, Bucht, Freude, Andacht, Zukunft, Vorsicht, Gruft, Schnitt, Verlust.*

3. Write a short account of the life and writings of Heine.

4. Give the narrative of two of Uhland's Ballads.

### ITALIAN.—FIRST PAPER.

FRIDAY, 28th September 1900.—12 NOON to 1.30 P.M.

Translate into Italian:—

(a) Atossa appeared before Darius to reproach him for sitting idle on his throne without making an effort to extend the Persian power. "A man who is young," she said, "and lord of vast kingdoms, should do some great thing that the Persians may know that it is a man who rules over them." In reply Darius said that he was about to make an expedition into Scythia. "Nay," answered Atossa, "go not against the Scythians first. I have heard of the beauty of the women of Hellas, and desire to have Athenian and Spartan maidens among my slaves: and thou hast here one who above all men can show thee how thou mayest do this,—I mean him who has healed thy foot." Atossa, however, could obtain nothing more than an order that some ships should be sent to spy out the land, and that Democedes should serve as guide.

(b) (1) It was for you to go there.

(2) It was two in the morning before I went to bed.

- (3) I am going to declare myself his friend.
- (4) I shall go and see them to-morrow, if I have time.
- (5) It seemed as if his arguments were justified.

SECOND PAPER.

FRIDAY, 28th September 1900.—3 to 5 P.M.

I. Translate into English:—

(a) Dovete sapere, che Coppo di Borghese Domenichi (il qual fu nella nostra città, e forse ancora è uomo di reverenda e di grande autorità ne' di nostri, e per costumi e per virtù molto più che per nobiltà di sangue chiarissimo e degno d'eterna fama) essendo già d'anni pieno, spesse volte delle cose passate co' suoi vicini, e con altri si diletta di ragionare; la qual cosa egli, meglio, e con più ordine, e con maggiore memoria, ed ornato parlare, che altro uom seppe fare. Era usato di dire, tra l'altre sue belle cose, che in Firenze fu già un giovane, chiamato Federigo di messer Filippo Olberighi, in opera d'arme ed in cortesia pregiato sopra ogn' altro donzello di Toscana. Il quale, siccome il più de' gentiluomini avviene, d'una gentildonna chiamata Monna Giovanna s' innamorò, nei suoi tempi tenuto delle più belle e dello più leggiadre che in Firenze fossero.

- (b) Italia, Italia, o tu cui feo la sorte  
Dono infelice di bellezza, ond' hai  
Funesta dote d'infiniti guai,  
Che in fronte scritti per gran doglia porte.  
Deh! fossi tu men bella, o almen più forte,  
Onde assai più ti paventasse, o assai  
T' amasse men chi del tuo bello ai rai  
Par che si strugga, e pur ti sfida a morte!  
Ch'or giù dall' Alpi non vedrei torrenti  
Scender d' armati, e del tuo sangue tinta  
Bever l'onda del Po gallici armenti:

Nè te vedrei, del non tuo ferro cinta  
 Pagnar col braccio di straniera genti,  
 Per servir sempre o vincitrice o vinta.

## II. GRAMMAR.

1. Translate and analyse the following: *giocenotta, vecchiotto, fanciullone, benone, pochino, ladronaccio, freschetto.*
2. Parse: *salgono, escono, muoia, oda, cerrai, vedrei, trasse.*
3. Translate: *Il secento, cinquecentisti. Le fiere stesse amano i loro parti.*

## III. LITERATURE AND PHILOLOGY.

(Only one question to be attempted.)

1. Give the etymology of the following adjectives, and of the following forms of the future and preterite tenses: *questo, quello, amerò, amerai, amai, amasti, ammamo.*
2. Analyse the influence of the Italian Literature of the Renaissance on English Literature.
3. Write a brief sketch on Alfieri and his works.
4. Name the authors of, and write a short literary note on, the following works: *Il Decamerone, La Jerusalem liberata, l'Amenta, Il Principe, Le mie Prigioni.*

## DYNAMICS.

FRIDAY, 5th October 1900.—1 to 4 P.M.

*Candidates may obtain FULL marks by doing about two-thirds of this Paper.*

*Answers, where work is not shown, will not be awarded marks.*

1. State and prove the rule for the composition of two given velocities.

A destroyer is five miles west of a ship and is going eastward at 24 miles an hour. The ship is moving northward at 7 miles



n hour. Find, in magnitude and direction, the velocity of the ship relative to the destroyer, and find when they are nearest.

2. Define uniform acceleration and average velocity.

If a point move in a straight line starting with velocity  $u$  and having a constant acceleration  $f$ , so that at the end of a time  $t$  it has a velocity  $v$ , and is at a distance  $s$  from the starting-point, employ your definitions to find any two formulae connecting these five quantities.

If the point start with a velocity of 5 cm. per sec. and in 5 sec. have a velocity of 25 cm. per sec., find the acceleration and distance traversed.

3. Define the terms *force*, *weight*, and *dyne*. What is the experimental justification of the statement that the weight of a body is proportional to its mass?

If the acceleration of gravity be 32.2 in feet and seconds, and 1 in. = 2.54 cm., what is the ratio of a dyne to the weight of a milligramme?

4. Prove that the path of a projectile in vacuo is a parabola. Prove that at any point of the path the velocity is that due to fall from the directrix, while the vertical component is that due to a fall from the vertex of the parabola.

5. Prove that the time taken by a particle in falling from rest at the highest point of a vertical circle down any chord of the circle is constant.

Two vertical circles of radii  $a$  and  $b$  touch at their lowest point  $P$ , through which is drawn a chord  $PBA$  cutting the circles in  $B$  and  $A$  and making an angle  $\theta$  with the vertical. Calculate the time of falling, in a straight line, from rest at  $A$  to the point  $B$ .

6. If two smooth spheres of given masses and coefficient of restitution, impinge directly with given velocities, find the velocities after impact.

If the masses be 40 and 50 grammes and the velocities,

in opposite directions, be 5 and 4 cm. per sec. respectively, calculate the final velocities, if the coefficient of restitution be  $\cdot 8$ .

7. Define *work*, *energy*, *erg* and *horse-power*.

What is the horse-power exerted by an engine dragging a train of 100 tons up a smooth incline of 1 in 200, at the steady rate of 20 miles an hour?

8. State the theorems known as the "triangle of forces" and the "polygon of forces."

$P$ ,  $Q$ ,  $R$ ,  $S$  are the mid-points of the sides  $AB$ ,  $BC$ ,  $CD$ ,  $DA$  of a quadrilateral. Prove that the resultant of two forces represented in direction and magnitude by  $PR$  and  $QS$  is represented in direction and magnitude by  $BD$ .

9. Investigate the conditions of equilibrium of three co-planar forces acting on a rigid body.

Three equal forces  $P$  act at the corners of a rigid isosceles triangle which is in equilibrium. If the force at the vertex bisect the vertical angle, which is  $90^\circ$ , find the angles the other two make with the base.

If the triangle consist only of three light rods, what is the stress along each of the rods forming the equal sides?

10. What is meant by the principle of work applied to machines? Explain the statement "What is gained in power is lost in speed."

Apply the principle of work to find the relation between the "power" and the "weight" in a system of four movable pulleys when all the ropes are attached to the weight.

11. State the laws of statical friction; and define the coefficient of friction.

A horizontal force can just push a body up a rough plane inclined at an angle  $\alpha$  to the horizon. If the force is equal to the weight of the body, and  $\tan \alpha = \frac{1}{2}$ , what is the value of the coefficient of friction?

**12.** Define a fluid. Distinguish between solid, liquid and gas, and between a soft solid and a viscous fluid.

What is meant by equable transmission of pressure? Describe any machine in which this principle is used.

**13.** Define resultant pressure, and state how to find its magnitude in the case of a plane area immersed in a heavy liquid.

Find the magnitude and position of the resultant pressure on a vertical triangle whose base of 5 cm. lies in, and whose vertex is 12 cm. below, the surface of water on which there is no pressure.

**14.** What is Boyle's Law? Describe shortly how it may be proved.

A cylindrical diving bell is lowered into water until the water-surface inside is 12 metres below the surface outside. If the pressure of the atmosphere be equal to that due to 9 metres of water, what fraction of the length of the bell is occupied by water?

**15.** Define density, and describe a method of finding it for gas.

A closed, thin, exhausted cylinder 30 cm. long floats with its vertical in a liquid of sp. gr. 5. If a gas of density  $\frac{1}{50}$  of that of water is allowed to fill the cylinder, how far will the latter sink?

FRIDAY, 5th April 1901.—1 to 4 P.M.

**1.** Define acceleration? Prove that  $s = ut + \frac{1}{2}ft^2$ , in the usual notation.

What does an acceleration of 980 in centimetre and second units become when expressed in kilometre and hour units?

**2.** Two points *A* and *B* are in motion in different directions. Show how to find the velocity of *A* relatively to *B*.

A river is 3 miles wide and runs at 3 miles an hour. Find

the tangent of the angle which must be made with the bank by a boat which can move at 5 miles an hour in order that it may go straight to a point one mile up stream on the opposite bank.

3. Define momentum and impulse. Give the third law of motion, and show how it determines the relation between the velocity of a shot and the velocity of recoil of the gun.

If the gun be 50 times the weight of the shot and make an angle  $\tan^{-1}\frac{1}{3}$  with the horizon, prove that the vertical and horizontal components of the velocity of the shot will be in the ratio of 17 to 50, the gun recoiling horizontally.

4. Define energy, kinetic energy, and potential energy. Prove that the sum of the kinetic and potential energies of a body falling freely under gravity is constant.

A particle weighing one gram falls from a height of 16.9 mètres. One second later another equal particle is thrown up from the ground in the same straight line with a velocity of 4.2 mètres per sec. Find their kinetic energies when they meet. ( $g=980$  c.g.s. units.)

5. Describe shortly an Atwood's machine, working out the formulae for finding the acceleration and the tension of the string, and show how the apparatus may be used to find  $g$ .

If the masses be each 200 grammes and the rider 15 grammes, find the acceleration and the tension of the string.

6. Find, in terms of the magnitude and direction of the initial velocity, the range on the horizontal plane through the point of projection for an unresisted projectile.

Find the velocity at any point of the path and the level from which it must fall freely in order to acquire this velocity.

7. Show how to find the magnitude and direction of the resultant of any number of forces in one plane acting on a particle.

Find the magnitude of the resultant of forces  $P$ ,  $6P$ , and  $9P$ , when the second force makes  $60^\circ$  with each of the others.

8. Define a couple and its moment. Prove that two couples in one plane with equal and opposite moments will balance each other.

A thin ring, weighing 200 grammes and of 8 cm. diameter, rests in equilibrium in an inclined position round a vertical post whose circular cross-section has a diameter of 4 cm. The highest point of the ring is caught on a slight projection from the post. Find the reaction between the post and the lowest point of the ring.

9. Define the centre of gravity of a body. If a body be suspended by a string, prove that the centre of gravity is in the same line as the string.

Find the centre of gravity of a plane uniform lamina in the shape of a triangle.

10. Define the mechanical advantage of a lever or other "mechanical power." Find it for a smooth screw in terms of the arm of the "power" and the "step" or interval between successive threads of the screw.

Find the advantage in the case of a system of two movable pulleys, each  $\frac{1}{2}$  of the weight raised, when all the strings are fastened to the supporting beam.

11. State the laws of statical friction. If a body be placed on a plane which is slowly tilted until it begins to slide down, find the relation between the inclination at which this takes place and the coefficient of friction between the body and the plane.

A mass of 20 kilogrammes is pushed up a rough inclined plane by a force parallel to the plane. If the coefficient of friction be  $\frac{1}{3}$ , and if the base of the plane measure 3 metres and the height 2, find the work done.

12. Define pressure at a point in a fluid. Prove the law of variation of pressure with the depth in a heavy liquid.

A U-tube contains mercury. Sufficient water is poured into

one arm to fill 5 cm. of the tube. Find the difference of level between the top of the water and the top of the mercury in the other arm, the specific gravity of mercury being 13·6.

13. Find the magnitude of the resultant pressure of a liquid on a solid wholly or partially immersed in it.

A body whose weight is 500 grammes and whose volume is 450 cubic centimetres is held completely immersed in a liquid of specific gravity 2 by means of a string. Find the tension of the string.

14. Define specific gravity, and show how to find it for a solid lighter than water.

A Nicholson's hydrometer can be sunk in water to the fixed mark by 25 grammes in the upper pan or by 30 grammes in the lower. Find the specific gravity of the weights.

15. Explain the action of the common pump.

Find the difference between the pressures on the upper and the lower surfaces of the piston, if it be 6 mètres above the surface of the water in the well and ·5 mètre below the spout.

## Additional Examination Papers for First Year Open Bursaries in Arts.

### ENGLISH.

FRIDAY, 28th September 1900.—9 to 12 o'clock.

(Not more than SEVEN questions to be answered, of which the Essay must be one.)

1. Write an Essay on *one* of the following subjects:—
  - (a) The immediate forerunners of Shakespeare.
  - (b) The poetical importance of Pope.
  - (c) Ruskin's influence on English prose.



2. Give the authors (where known) of the subjects, and a very brief account of the literary character, of:—*The Fight at Finnsburgh, The Ormulum, Cursor Mundi, Confessio Amantis, The Pastime of Pleasure, The Steel Glass, Polyolbion, The Holy War, Trivia, The Man of Feeling, Thalaba.*

3. Describe more fully one of the following:—Prologue to the *Canterbury Tales, The Shepherd's Calendar, Shakespeare's Sonnets, Comus, Hudibras, The Spectator, The Vicar of Wakefield.*

4. Give some account of the life and works of two of the following:—Dunbar, Sir Philip Sidney, Sir Thomas Browne, Cowley, Steele, Smollett, Crabbe.

5. What is meant by accentual and quantitative scansion respectively? Give, in the terms of each of the systems, a full metrical account of the following passages:—

“The multitudinous seas incarnadine.”

“Topsy dance and jollity.”

“The earth cumbered, and the winged air darked with plumes.”

“And the sword of the tourney across her throat.”

6. Mention some grammatical peculiarities which are found in Shakespeare, but not customary in modern English.

7. What is the position of Johnson in English Literature? Account for it both by his qualities and by the circumstances of the time.

8. Mention, with a few particulars of each, the chief English novelists before Scott.

9. Turn the following into modern English, with explanatory notes if necessary:—

(a) Seo burh was getimbrad on fildum lande, and on swide emnum, and heo was swide fieger on to locianne, and heo is swide rihte feowerseyte, and paes wealles mycelnyss and faestnyss is ungelyfedlic to seegenne.

(b) To heanlic me pinceð

ƿæt ge mid urum sceattum  
to scype gangon  
unbefohtene.

- (c) Wurð for niðing ƿe mon  
ƿe nule hine sturien,  
habben bares heorte  
and remes brede,  
cuðen ƿan kinge  
ƿat we quiken sunde.

- (d) "Purfild with peloure"—"of the preciourest perre"—  
"i-copet as a frere"—"if yt be payed prestliche"—  
"here ruele vuel yholde."

## L A T I N.

SATURDAY, 6th October 1900.—9 to 10.30 A.M.

### 1. Translate into Latin Prose :—

In short every rumour tended to increase the apprehension among the insurgents that the king's vengeance had only been delayed in order that it might fall more certain and more heavy. Morton endeavoured to fortify the minds of the common people by pointing out the probable exaggeration of these reports, and by reminding them of the strength of their own situation, with an unfordable river in front, only passable by a long and narrow bridge. He called to their remembrance their victory over Claverhouse, when their numbers were few, and then much worse disciplined and appointed for battle than now; showed them that the ground on which they lay afforded, by its undulation, and the thickets which intersected it, considerable protection against artillery, and even against cavalry, if stoutly defended; and that their safety in fact depended on their own spirit and resolution.

2. Translate into English:—

Lupis et agnis quanta sortito obtigit,  
 tecum mihi discordia est,  
 Hibericis peruste funibus latus  
 et crura dura compede.  
 licet superbus ambules pecunia,  
 fortuna non mutat genus.  
 videsne, Sacram metiente te viam  
 cum bis trium ulnarum toga,  
 ut ora vertat huc et huc euntium  
 liberrima indignatio?  
 “sectus flagellis hic triumviralibus  
 praeconis ad fastidium  
 arat Falerni mille fundi iugera  
 et Appiam mannis terit  
 sedilibusque magnus in primis eques  
 Othone contempto sedet.  
 quid attinet tot ora navium gravi  
 rostrata duci pondere  
 contra latrones atque servilem manum,  
 hoc, hoc tribuno militum?”

G R E E K.

SATURDAY, 6th October 1900.—10.30 to 12 o'clock.

3. Translate:—

οὐκοῦν ἄτοπον, εἰ μὲν ἀργύριόν τις ἑμῶν ἐχαρίζετο ἀφ' ἑαυτοῦ,  
 ἑὸς ἢ μέτοικος, τοῦτον μὲν οὐκ ἂν ἡγείσθε περιέργον, ὅτι οὐδὲν  
 ροσθήκειν δοκῶν ἐφιλοτιμεῖτο οὐδ' ἑμῶν ἀπαιτούντων· συμβουλευ-  
 ντος δέ τι τῶν χρησίμων δισχερέστερον ἀκούσεσθε, ὅς ἂν μὴ τύχη  
 ληθεῖς ἢ μὴ πολίτης ὑπάρχει. καίτοι χρημάτων μὲν οὐθ' ὑμεῖς  
 φόδρα ἴσως ἐν τῷ παρόντι δεῖσθε, γνώμης δὲ ἀγαθῆς οὐκ ἔστιν

οὐδείς ὁ μὴ θεόμενος ἐν παντὶ καιρῷ καὶ πρὸς ἅπαντα τὸν βίον, οὐδὲ ὁ κάλλιστα πράττειν δοκῶν. εἰ μὲν οὖν περὶ τίνος τῶν προκειμένων ἔλεγον, οὐδὲν ἂν ὑπὲρ ἐμοῦ τηλικούτου ὠφελεῖσθε· εἰκὸς γὰρ ἦν καὶ καθ' αὐτοὺς ὑμᾶς τὸ δέον εἶρεῖν σκοποῦντάς γε ἅπασι· ἐπεὶ δὲ ὑπὲρ οὗ μὴδὲ ζητεῖτε τὴν ἀρχὴν ὅπως ποτὲ ἔχει, τοῦτό φημι δείξειν αἰσχιστα γιγνόμενον, πῶς οὐκ ἂν εἴην παντελῶς ὑμῖν χρήσιμοι πράγματα πεποιηκώς, εἰν ἄρα μὴ φανῶ ψευδόμενος;

## II. For Greek Prose:—

In a word, the scheme hit so exactly with my temper, that is to say, the prepossession I was under, that I told him in few words, if he agreed with the merchants, I would go with him: but I told him, I would not promise to go any farther than my own island. Why, Sir, says he, you don't want to be left there again, I hope? Why, said I, can you not take me up again in your return? He told me, it could not be possible that the merchants would allow him to come that way with a loaded ship of such value, it being a month's sail out of his way, and might be three or four: besides, Sir, if I should miscarry, said he, and not return at all, then you would be just reduced to the condition you were in before.

*Robinson Crusoe.*

## MATHEMATICS.

SATURDAY, 6th October 1900.—2 to 5 P.M.

1. Prove that the circumcentre, the centroid, and the orthocentre of a triangle are collinear.

Given the base of a triangle, both in magnitude and in position, and also the circumcentre, find the loci of the centroid and the orthocentre.

2. Give Euclid's (or any other) construction for the division of the circumference of a circle into five or ten equal parts.

In the triangle  $ABC$ ,  $AB=AC$ , and each of the angles  $B$  and

$C$  is three times the angle  $A$ .  $P$  and  $Q$  are points in  $AC$ ,  $P$  being next to  $A$ , such that  $BP$  and  $BQ$  trisect the angle  $B$ .

If  $x$  be the ratio of  $AB$  to  $BC$ , and  $BC=a$ , shew that  $CQ=a/x$ ,  $AP=(x-1)a$ ; and hence prove that  $x$  is a root of the "irreducible" cubic  $x^3-2x^2-x+1=0$ .

Explain, if you can, the significance of the word "irreducible" in the present case: and draw conclusions regarding the septisection of the circle.

3. Give the construction for a circle which shall pass through two given points, and touch a given straight line.

$XY$  is a given straight line, and  $O$  a given point without it.  $A$  and  $A'$  are points on  $XY$ , and  $P$  is such that  $OAP$  and  $OA'P$  are right angles. If  $A$  be kept fixed and  $A'$  made to move up infinitely near to  $A$ , shew that the distance of  $P$  from  $A$  is ultimately  $a\sqrt{(a^2-b^2)}/b$ , where  $a$  and  $b$  are the distances of  $O$  from  $A$  and from  $XY$  respectively.

4. Prove that the cross ratio of the range in which a variable transversal is cut by a given pencil of four rays is constant.

$A, B, C, D$  are four points on a circle;  $A', B', C', D'$  their images in any diameter.  $L$  and  $L'$  are any other two points on the circle, and  $P, Q, R, S$  are the intersections of  $LA$  and  $L'A'$ , of  $LB$  and  $L'B'$ , of  $LC$  and  $L'C'$ , and of  $LD$  and  $L'D'$  respectively. Prove that if any three of  $P, Q, R, S$  are collinear, all four are collinear.

5. Describe the geometrical method of transforming figures which is called *Inversion*.

Prove that a straight line in general inverts into a circle; and point out the exception.

Taking one of the vertices of a triangle as centre of inversion, invert the theorem that the three perpendiculars from the vertices on the opposite sides are concurrent: and give an independent proof of the inverse theorem.

6. Prove (without using the circular functions) that the area of a triangle is given by  $\sqrt{\{s(s-a)(s-b)(s-c)\}}$ , where  $a, b, c$  are the sides of the triangle, and  $s = \frac{1}{2}(a+b+c)$ .

If  $a$  be the base of an isosceles triangle, and  $b$  one of the equal sides, shew that the distance of the orthocentre from  $A$  is  $(2b^2 - a^2) / \sqrt{4b^2 - a^2}$ .

7. Find the locus in space of three dimensions, 1st of a point which is equidistant from two given points; 2nd, of a point which is equidistant from three given points.

$X$  and  $Y$  are two planes at right angles to each other.  $L$  and  $M$  are any straight lines in  $X$  and  $Y$  respectively. If  $L$  be perpendicular to  $M$ , shew that either  $L$  or  $M$  is perpendicular to the line of intersection of  $X$  and  $Y$ .

8. Shew that a common perpendicular can always be drawn to two non-intersecting straight lines in space of three dimensions, and that this perpendicular is the shortest distance between them.

If three non-intersecting straight lines be parallel to the same plane, shew that any transversal which cuts all three is always divided by them in the same ratio.

9. Prove the theorem of Archimedes regarding the quadrature of a spherical zone.

Find an expression for the volume cut from a sphere by a trihedral solid angle whose vertex is at the centre and each pair of whose facial planes includes an angle of  $75^\circ$ .

10. Give all the different types of quaternary products of three variables  $x, y, z$ ; and state how many terms there are of each type.

Distribute and arrange according to type  $(y^2 - yz + z^2)(y + z - x)^2 + (z^2 - zx + x^2)(z + x - y)^2 + (x^2 - xy + y^2)(x + y - z)^2$ .

Distribute and arrange according to powers of  $x$

$(x^n - x^{n-1} + x^{n-2} - \dots - 1)(x^n + x^{n-1} + \dots + 1)$ ,  $n$  being odd.



11. Explain what is meant by the principle of *indeterminate coefficients*: and apply it to obtain the expansion of  $(x+y+z)^3$ :

Verify that there exists an identity of the form

$$\frac{x+A}{x^2+a^2} - \frac{x+B}{x^2+b^2} = (a-b) \frac{x^2 - (a+b)x + ab}{(x^2+a^2)(x^2+b^2)},$$

where  $A$  and  $B$  are independent of  $x$ ; and determine  $A$  and  $B$ .

12. Prove that  $x^2+y^2+1$  cannot be resolved into the product of two linear integral functions of  $x$  and  $y$ .

Factorise as far as you can

$$(i) \ x^5 + 3x^4 + 2x^3 + x^2 + 3x + 2;$$

$$(ii) \ x^6(y^2 - z^2) + y^6(z^2 - x^2) + z^6(x^2 - y^2).$$

13. Solve the cubic  $2x^3 - 3x^2 - x + 12 = 0$ , given that the sum of two of its roots is 3.

Solve  $\sqrt{(x^2+3x-2)} + \sqrt{(x^2+3x+7)} = 9$ : also the system

$$x^4 = (x+1)^2 y^2 + x^2 + (x+1)y,$$

$$x^2 = (x+1)y + 1;$$

and remark on the special peculiarity of this system.

14. Shew that any integral function of the radicals  $\sqrt{x}$ ,  $\sqrt{y}$  can be reduced to the linear form  $A + B\sqrt{x} + C\sqrt{y} + D\sqrt{x}\sqrt{y}$ , where  $A$ ,  $B$ ,  $C$ ,  $D$  are rational functions of  $x$  and  $y$ .

State the corresponding theorem for three radicals  $\sqrt{x}$ ,  $\sqrt{y}$ ,  $\sqrt{z}$ .

Reduce to linear form

$$\frac{1}{(1 - \sqrt{p} - \sqrt{q} + \sqrt{p}\sqrt{q})^2} + \frac{1}{(1 + \sqrt{p} + \sqrt{q} + \sqrt{p}\sqrt{q})^2}.$$

15. Shew that all the onefold infinity of solutions of the equation  $y = mx + c$  can be graphically represented by means of a straight line.

Trace the graph of the function  $x + 1/(x-1)$ : and calculate its maximum and minimum values.

## HIGHER GEOMETRY.

FOR WELSH MATHEMATICAL BURSARIES AND KELLAND PRIZE.

MONDAY, 8th October 1900.—9 A.M. to 12 NOON.

1. Define the Power or Potency of a point with respect to a given circle, and prove that the locus of points of equal power with respect to two circles is a straight line.

Shew that the locus of a point, the sum of whose powers with respect to two fixed circles  $C_1$  and  $C_2$  is equal to the sum of its powers with respect to two circles  $C_3$  and  $C_4$ , is a straight line on which intersect the radical axis of  $C_1$  and  $C_3$ , and that of  $C_2$  and  $C_4$ . State a similar but more general locus theorem for any number of circles, the locus being still a straight line.

2. Shew that the straight lines joining the vertices of a triangle to the middle points of the opposite sides are concurrent.

$ABCD$  is a convex quadrilateral, and  $O, P, Q, R$  are the centroids of the triangles  $ABC, BCD, CDA, DAB$ . If  $OPQR$  is a convex quadrilateral, prove that its area is a ninth of the area of  $ABCD$ .

3. Define as a locus the Polar of a point with respect to a given circle; and prove that the locus is a straight line.

A circle of centre  $O$  is taken inside a quadrilateral  $ABCD$ , the poles of whose sides are  $KLMN$ . Shew that the two quadrilaterals are such that the lines joining  $O$  to the vertices of the one are perpendicular to the sides of the other.

Prove that the locus of the poles of all tangents to an ellipse, with respect to a circle whose centre is at the focus, is a circle.

4. Assuming the expression for the perimeter of a circle of radius  $r$ , find an expression for its area.

Two equal circles touch at  $A$ , and are enveloped by a third circle whose centre is at  $A$ . A circle is described to touch these circles touching the two inner circles at  $B$  and  $C$ . Shew

that the sum of the arcs  $AB$ ,  $BC$ ,  $CA$ , is less than the semi-perimeter of one of the equal circles by half the arc  $BC$ .

5. Define the Position Ratio of a point  $P$  on a straight line with respect to two fixed points  $A$  and  $B$  on the line; and prove that to any given numerical value of the position ratio, there corresponds one unique point on the straight line.

The position ratios of  $P$  and  $Q$  on a straight line with respect to  $A$  and  $B$  are  $\rho$  and  $\delta$ . Find the position ratios of  $A$  and  $B$  with respect to  $P$  and  $Q$  as base points.

The sides  $BC$  and  $CA$  of the triangle  $ABC$  are divided in the same ratio  $\rho$  in  $P$  and  $Q$ . Prove that the straight line joining the middle point of  $PQ$  to the centroid of the triangle divides  $AB$  in the ratio  $\rho$ .

6. When is a geometrical problem soluble by a Euclidean construction? State some well-known problems which are not so soluble.

Construct a triangle, being given any three of the points of trisection of the sides, one on each side.

$ADB$  is a minor arc of a circle whose centre is  $O$ , and the arc  $BD$  is a third of the arc  $BA$ .  $OD$  meets the chord  $AB$  in  $C$ . Prove that  $BC$  is a mean proportional between  $OB$  and  $CD$ .

7. Distinguish and classify the various loci that may arise in space of three dimensions.

$OX$ ,  $OY$ ,  $OZ$  are three straight lines in space, and  $P$  is a point whose projections on them are  $L$ ,  $M$ , and  $N$ . If  $OL = OM = ON$ , prove that the locus of  $P$  is a straight line.

Shew that in general an infinite number of straight lines may be drawn to cut three given straight lines in space. Point out some exceptional cases.

8. Define a regular convex polyhedron, and shew that the number of such regular solids is limited. Give the names of the regular polyhedra, and the number of vertices and edges for each.

Prove that the centres of the faces of a cube are the vertices of a regular octahedron.

9. Find an expression for the surface and volume of a right circular cone, in terms of the radius of its base, and its altitude.

A shallow circular trough is hewn out of stone. The base is cylindrical, 18 inches in diameter, and 1 inch thick; while a right central section of the trough cuts the sides in equilateral triangles of side 3 inches, the extreme base vertices just meeting the rim of the base. Calculate the volume of stone in the trough, and also the amount of its surface.

10. Prove that the area of a segment of a parabola is two-thirds of the area of the triangle formed by its chord and the tangents at the extremities of the chord.

Two congruent parabolas have a common vertex  $O$ , and their axes are at right angles. They cut again in  $P$ , and  $PM$  and  $PN$  are drawn at right angles to the axes. Prove that the arcs of the parabolas divide the square  $OMPN$  into three equal areas.

11. Prove that the locus of the image of the focus of a parabola in the tangent is a straight line.

$P$  is a fixed point outside a line  $L$ .  $Q$  is any point in  $L$ , and  $QR$  is drawn perpendicular to  $PQ$ . Prove that  $QR$  envelops a parabola.

12.  $N$  is any point in the major axis  $AA'$  of an ellipse, and  $NP$ , drawn at right angles to  $AA'$ , meets the ellipse in  $P$ . Prove that the ratio of  $PN^2$  to  $AN.A'N$  is constant.

A rectangle is described touching a given ellipse at its vertices. A straight line drawn parallel to a side of the rectangle meets the rectangle in  $P$  and the ellipse in  $P'$ . Prove that the locus of the middle point of  $PP'$  is an ellipse.

## FRENCH.

THURSDAY, 27th September 1900.—2 to 3.30 P.M.

## I. Translate into English:—

(a) Les littératures des peuples latins sont classiques et se rattachent de près ou de loin à la poésie grecque, à l'éloquence romaine, à la renaissance italienne, au siècle de Louis XIV. ; elles épurent et ennoblissent, elles embellissent et retranchent, elles ordonnent et proportionnent. Leur dernier chef-d'œuvre est le théâtre de Racine, le peintre des façons princières, des convenances de cour, des personnages mondains, des âmes cultivées, le maître du style oratoire, de la composition savante, de l'élégance littéraire. Au contraire, les littératures germaniques sont romantiques et ont pour première souche l'Edda et les vieilles *sagas* du Nord ; leur plus grand chef-d'œuvre est le théâtre de Shakespeare, c'est-à-dire la représentation crue et complète de la vie réelle avec tous les détails atroces, ignobles et plats, avec tous les instincts sublimes et brutaux, avec toute la saillie de toute la nature humaine étalée aux regards dans un style tantôt familier jusqu'à la trivialité, tantôt poétique jusqu'au lyrisme, toujours affranchi de toute règle, incohérent, excessif, mais d'une puissance incomparable pour transporter dans les âmes, toute chaude et toute frémissante, la passion dont il est le cri.

TAINÉ.

(b) Que j'aime le premier frisson d'hiver ! le chaume,  
 Sous le pied du chasseur, refusant de ployer !  
 Quand vient la pie aux champs que le foin vert embaume,  
 Au fond du vieux château s'éveille le foyer ;

C'est le temps de la ville.— Oh ! lorsque l'an dernier  
 J'y revins, que je vis ce bon Louvre et son dôme,  
 Paris et sa fumée, et tout ce beau royaume  
 (J'entends encore au vent les postillons crier),

Que j'aimais ce temps gris, ces passants et la Seine  
 Sous ses mille falots assise en souveraine !  
 J'allais revoir l'hiver.—Et toi, ma vie, et toi !

Oh ! dans tes longs regards j'allais tremper mon âme ;  
 Je saluais tes murs.—Car, qui m'eût dit, madame,  
 Que votre cœur sitôt avait changé pour moi ?

A. DE MUSSET.

## II. Translate into French :—

And now, my dear, let me tell you once more, that your kindness in promising us a visit has charmed us both. I shall see you again. I shall hear your voice. We shall take walks together. I will show you my prospects, the hovel, the alcove, the Ouse and its banks, everything that I have described. I anticipate the pleasure of those days not very far distant, and feel a part of it at this moment. Talk not of an inn ! Mention it not for your life ! We have never had so many visitors, but we could easily accommodate them all ; though we have received Unwin, and his wife, and his sister, and his son all at once. My dear, I will not let you come till the end of May, or beginning of June, because before that time my greenhouse will not be ready to receive us, and it is the only pleasant room belonging to us.

COWPER.

## GERMAN.

THURSDAY, 27th September 1900.—3.30 to 5 P.M.

## I. Translate into English :—

(a) Nehmen sie Burns. Wodurch ist er groß, als daß die alten Lieder seiner Vorfahren im Munde des Volkes lebten, daß sie ihm zuzusagen bei der Wiege gesungen wurden, daß er als Knabe unter ihnen heranwuchs und die hohe Vortrefflichkeit dieser Muster sich ihm so einlebte, daß er darin eine lebendige Basis hatte worauf er



weiter schreiten konnte. Und ferner, wodurch ist er groß, als daß seine eigenen Lieder in seinem Volke sogleich empfängliche Ohren fanden, daß sie ihm alsobald im Felde von Schnittern und Binderinnen entgegenklangen, und er in der Schenke von heitern Gefellen damit begrüßt wurde. Da konnte es freilich etwas werden.

GOETHE'S GESPRÄCHE.

(b) In Rousseaus *Emil* findet sich folgende merkwürdige Stelle: „Ein Buch ist es, das mein *Emil* zuerst lesen soll; es wird lange Zeit ganz allein seinen Bücherschatz bilden und wird jederzeit den vornehmsten Rang in diesem einnehmen. Es soll der Text sein, von dem unsere Unterhaltungen über die menschlichen Erfindungen und Wissenschaften ausgehen; es soll der Prüfstein sein, an dem ich die Fortschritte in der Urteilskraft meines Zöglings erproben will; und so lange sein Geschmack einfach und natürlich bleibt, weiß ich, wird die Lektüre desselben ihm ein immer neues Vergnügen bereiten. Und was ist dies für ein wunderbares Buch? Ist es *Aristoteles*? Ist es *Plinius*? Ist es *Buffon*? Nein! Es ist *Robinson Crusoe*.“

HETTNER.

(c) EBENE VON MARATHON.

Halb von öden Gebirgen umkränzt, streckt Marathons heil'ge Thalstür gegen des Meers schimmernde Bucht sich hinab.

Feierlich schweigt es umher, stumm kreisen die Adler, und einsam  
Über dem weiten Gefild schwebt der Gefallenen Ruhm.

GEIBEL.

II. Translate into German :—

My journey lay over the field of *Thrasymenus*, and, as soon as the sun rose, I read *Livy's* description of the scene, and wished that I had brought *Polybius* too. However, it mattered little, for I could see absolutely nothing. I was exactly in the situation of the consul *Flaminius*; completely hid in the morning fog. I did not discern the lake till the road came quite close to it, and then my view extended only over a few yards of reedy mud and shallow water, so that I

can truly say, I have seen precisely what the Roman army saw on that day. After some time we began to ascend, and came at last, with the help of oxen, to an eminence on which the sun shone bright. All the hill-tops around seemed perfectly clear, and the fog lay in the valley below like a lake winding among mountains. I thus understood the immense advantage which Hannibal derived from keeping his divisions on the heights, where he could see them all, and where they could see each other, while the Romans were stumbling and groping, without the possibility of concord, through the thick haze below.

MACAULAY.

## G A E L I C.

### FOR MACKINNON BURSARY.

MONDAY, 8th October 1900.—9 to 12 o'clock.

#### 1. Translate into English:—

Latha bha Fionn Mac Cumhail agus a' chuid eile de'n Fhéinn anns a' bheinn-sheilg dh'éirich cur is cathadh, agus mu'n d'fhuair iad an t-sealg a chur cruinn thainig an t-anmoch orra. Sgith, airsneulach mar bha iad, thog iad orra gu tearnadh gu baile. Mar bha iad a'gabhail air an aghaidh gu trom, aithiseach, thainig iad air bothan fàs am bràighe glinne agus ghabh iad gu tàmh ann.

2. Write the genitive, singular and plural, of the following nouns:—*mac, bean, léine, litir, duine, làir*.

3. How are adjectives compared in Gaelic? Give the comparative of the following:—*maith, olc, sean, liath*.

#### 4. Translate into idiomatic Gaelic:—

You must not go until you eat a bit and drink a sip. That indeed would be a reproach to us that we would not soon get over. My daughters and I would not hear the end of it from the men at the sea, were we to allow a wayfarer to go from our door hungry, thirsty, and weary.

5. Give the infinitive of the following verbs:—*cuir, abair, rach, seas, fàg, suidh.*

6. Translate into English:—

Ciad fàilt' ort fhéin, a bhadain fhraoich  
 Bho thir nan aonach àrd,  
 An tìr a dh' àraich iomadh laoch,  
 Ge sgaoilt' an diugh an àl;  
 Tha snuadh mo dhùthcha air do ghruaig,  
 Seasaidh tu fuachd is blàths,  
 'S e mheudaich dhomh cho mòr do luach  
 Gu'n d'fhuair mi thu bho'n bhàrd.

7. State what you know of the author of any *one* of the following compositions:—*An Claiqeann, Long mhòr nan Eilthireach, Moladh Beinn Dòrain.*

## Preliminary Examination Papers for Degrees in Medicine.

### ENGLISH.

SATURDAY, 29th September 1900.—9 AM. to 12 NOON.

EIGHT, and not more than EIGHT, questions are to be answered. 1 and 2 must be answered with either 3 or 4, and either 5 or 6. The remaining FOUR may be any questions not already answered.

1. Write an essay of from two to three pages on one of the following subjects:—

- (1) Progress in the Nineteenth Century.
- (2) If you wished to emigrate, what country would you choose, and why?
- (3) Any one of Shakespeare's plays.

## 2. Paraphrase :—

*On the Death of Sheridan.*

The flash of wit, the bright intelligence,  
 The beam of song, the blaze of eloquence,  
 Set with their sun, but still have left behind  
 The enduring produce of immortal mind ;  
 Fruits of a genial morn, and glorious noon,  
 A deathless part of him who died too soon.  
 But small that portion of the wondrous whole,  
 These sparkling segments of that circling soul,  
 Which all embraced, and lightened over all,  
 To cheer, to pierce, to please, or to appal.  
 From the charmed council to the festive board,  
 Of human feelings the unbounded lord ;  
 In whose acclaim the loftiest voices vied,  
 The praised, the proud, who made his praise their pride.  
 When the loud cry of trampled Hindustan  
 Arose to Heaven in her appeal from man,  
 His was the thunder, his the avenging rod,  
 The wrath, the delegated voice of God !  
 Which shook the nations through his lips, and blazed  
 Till vanquished senates trembled as they praised.

3. Give some account of *four* of the following: Boadicea, Dunstan, Becket, Duke Humphrey, Sir Philip Sidney, Strafford, Prior, Marlborough, Lord Chesterfield, Chatham, Wellington, Sir Robert Peel.

4. Give some account of *four* of the following :—Offa's Dyke, Battle of Brunanburgh, Battle of Sluys, Barons' Wars, Wat Tyler's Insurrection, Statute of Præmunire, Petition of Right, Triple Alliance, *Quo Warranto*, Septennial Act, Trial of Hastings, Catholic Emancipation.

5. Give the locality, and some circumstances connected with each, of *six* of the following: Norfolk Island, the Limpopo.

Plevna, Ismail, Lake Baikal, the Simplon, Merv, New Orleans, Callao, Badajoz, Manilla, the Seychelles.

6. Enumerate in geographical order the chief headlands, river-mouths, and important coast towns of South America.

Or,

State what have been the territorial modifications of the Turkish Empire during the present century.

7. Re-write, so as to correct and improve them, the following sentences, *giving reasons for any changes you may make* :—

(a) The book you sent me and which I value very much, gives me a different impression of America that what I formerly believed.

(b) The chairman thought that their primary duty should be to ask what was reasonable and fair and accept as much less as they possibly could.

(c) This is one of the most wonderful preparations that has been seen in modern times for the entire restoration of dimness or partial loss of sight.

(d) Entering one of the largest huts, preparations for an ample supper were promptly begun, and were very welcome for every one of us were hungry.

8. Give a general analysis of the following sentence, and parse the words in italics :—

On the *whole*, while the “ Essay on Criticism ” may be readily allowed to be superior in execution, as it certainly is in *compass*, to any work of a similar nature in English *poetry*, it can hardly be said either *to redeem* the class of didactic poems on æsthetics from the neglect into which they have fallen or to make *us regret* that the critical ability of our own day *should prefer* to follow the path *marked out* by Dryden when he chose to discourse of poetry in his own vigorous and flexible prose.

9. (a) Give the derivation of *eight* of the following words : Clinic, manual, anæmic, diagnosis, pulmonary, catarrh, palsy,

dyspepsia, homœopathy, candle, abridge, butcher, enemy, husband, liniment, lettuce.

Or,

(b) Give equivalents from the *Latia* for *five* of the following, adding the derivations of these equivalents: Knowledge, knave, gainsay, blessing, food, busy, wisdom, unfeeling, huge, handiwork.

10. Make sentences illustrating the various uses of "that," and explain the grammatical import of each. Distinguish the gerund from the participle in *ing*, with examples.

11. Give some account of *one* of the following: Spenser's *Shepherd's Calendar*; Bacon's *Essays*; Dryden's *Absolom and Achitophel*; Coleridge's *Ancient Mariner*; Shelley's *Adonais*; Carlyle's *Sartor Resartus*.

12. What is meant by: A sovereign international state; the *sudd* of the Nile; symbolism in literature; *res judicata*; a cavalry screen; the Devil's Advocate?

SATURDAY, 30th March 1901.—9 A.M. to 12 NOON.

1. Write an essay, of from two to three pages, on *one* of the following subjects:—

(1) On the special difficulties and advantages attending the adoption of Military Conscription in this country.

(2) Compulsory vaccination.

(3) On the distinctive qualities of Byron and Shelley as poets.

2. Paraphrase:—

There lies the port; the vessel puffs her sail:  
There gloom the dark broad seas. My mariners,  
Souls that have toiled, and wrought and thought with  
me—



That ever with a frolic welcome took  
 The thunder and the sunshine, and opposed  
 Free hearts, free foreheads—you and I are old ;  
 Old age hath yet his honour and his toil,  
 Death closes all : but something ere the end,  
 Some work of noble note, may yet be done,  
 Not unbecoming men that strove with Gods.  
 The lights begin to twinkle from the rocks :  
 The long day wanes : the slow moon climbs : the deep  
 Moans round with many voices. Come, my friends,  
 'Tis not too late to seek a newer world.  
 Push off, and, sitting well in order, smite  
 The sounding furrows ; for my purpose holds  
 To sail beyond the sunset, and the baths  
 Of all the western stars, until I die.

3. Give some account of any *four* of the following:—Bede, Anselm, Simon de Montfort, Wicliff, Bacon, Drake, Titus Oates, Dr. Johnson, Clive, Rockingham, Nelson, Lord Palmerston.

4. Give some account of any *four* of the following:—Battle of Hastings, Aids and Scutages, The “Mad” Parliament, The Black Death, Treaty of Troyes, Cade’s Rebellion, Battle of Barnet, The Spanish Armada, Ship-money, American War of Independence, The Factory Acts, Indian Mutiny.

5. Give the locality and some circumstances connected with any *six* of the following:—Chatham, Basel (Bâle), Malaga, Port Elizabeth, Ekaterinburg, Nagasaki, Port of Spain, Batavia, Port Arthur, Sorata, Bushire, Nicaragua, Potomac, Hobart, Yosemite.

6. Mention in order the principal capes, straits, islands, and forts that would be passed on a voyage from London to Sydney *viâ* the Suez Canal, Ceylon, and Fremantle.

Or,

Trace from west to east the southern boundary of Russia in

Asia, note carefully the names of the adjoining countries, and indicate the extensions of the Russian Empire within the last fifty years.

7. Re-write, so as to correct or improve them, the following sentences:—

- (a) It had been my intention to have called on you when in town, but the astonishing variety of sights have usurped my time.
- (b) Carlyle's *Heroes* are a grand work: if we but look within, we shall be richly rewarded by its perusal.
- (c) These people had never lived with their master, as Doddington at one time lived with his father, or as Sheridan afterwards lived with his son.
- (d) Being in his company the other day our conversation turned upon adventures that had happened actually by field and flood and one he told he vouched for the very truth of.

8. Give a *general* analysis of the following sentences, and parse the words in *italics*:—

*None* of the victories of the New Model were so glorious as the victory it won over itself. Quietly and without a struggle, as *men* who bowed to the inscrutable will of God, the farmers and traders who had dashed Rupert's chivalry to pieces on Naseby field *became* farmers and traders again, and were known by *no* other sign *than* their greater soberness and industry. As soon as the wild orgy of the Restoration was over, men began *to see that* nothing *that* was really worthy in the work of Puritanism had been *undone*.

9. Give the derivations of *eight* of the following words:—  
priest, sword, orchard, lady, dollar, mermaid, belief, cabbage, chess, kerchief, welkin, nostalgia, paynim, hideous, ontology, pedigree.

*Or,*

Give equivalent words of direct Latin origin, with their

derivations, for *five* of the following:—watchful, speed, foe, friendship, pride, madness, healthy, saying, clothing, heaviness.

10. Classify adjectives and give, along with a suitable noun, an example of each kind. How are adjectives of two syllables compared? Mention some that do not admit of comparison.

11. Write a short account of any *one* of the following works:—*The Anglo-Saxon Chronicle*, *Geoffrey of Monmouth's History of the Britons*, *The Knight's Tale*, *Utopia*, *The Hesperides*, *Adonais*, *MacFlecknoe*, *Gulliver's Travels*, *John Gilpin*, *The Two Dogs*, *A Canto of Childe Harold*, *Ode on the Death of the Duke of Wellington*.

12. What is meant by: Hobson's choice, an *alibi*, *doyen*, Pom-pom, prairie value, Liberal Imperialist?

## LATIN—GREEK—MATHEMATICS.

The papers in Latin, Greek, and Mathematics are the same as the Lower Standard papers in these subjects for Degrees in Arts and Science.

## FRENCH.

TUESDAY, 2nd October 1900.—3 to 6 P.M.

### I.

Translate into French:—

(a) A fisherman had made a hut by a riverside, that he might follow his occupation of fishing. Now, one night he had gone out to look after his nets, leaving a small fire in his hut, and when he came back, behold there was a fox in the cabin, taking the liberty to eat one of the finest salmon he had taken. "Ho! Mr. Robber!" said the fisherman, drawing his sword, and standing in the doorway to prevent the fox's escape, "you shall presently die the death!" The poor fox looked for

some hole to get out at, but saw none; whereupon he pulled down with his teeth a mantle which was lying on the bed, and dragged it across the fire. The fisherman ran to snatch his mantle from the fire, and the fox flew out at the door with the salmon.

- (b) 1. None of them will have time to do it.  
 2. You give yourself much trouble for nothing.  
 3. If we start at twelve, we shall arrive at ten minutes to one.  
 4. It was hot and we were thirsty.  
 5. Has anything happened while I was away?

## II.

Translate into English :—

(a) Lorsqu'un bon religieux, dans le fond d'un cloître d'Allemagne, enflamma pour la première fois un mélange de soufre et de salpêtre, quel mortel aurait pu lui prédire tout ce qui allait naître de son expérience? Changer l'art de la guerre; soustraire le courage à la supériorité de la force physique; rétablir en Occident l'autorité des rois; empêcher que les pays civilisés ne pussent de nouveau être la proie des nations barbares; devenir enfin l'une des plus grandes causes de la propagation des lumières, en contraignant à s'instruire les peuples conquérants qui, jusqu'alors, avaient été presque partout les fléaux de l'instruction: telle était la destination d'une des plus simples combinaisons de la chimie.

CUVIER.

(b) Dès le premier moment, le séjour de la "Maisonnette" me plut. Placée à mi-côte, elle avait vue sur la petite ville de Meulan avec ses deux églises, l'une rendue au culte, l'autre un peu ruinée et changée en magasin; à droite de la ville, les regards tombaient sur l'île Belle, toute en vertes prairies et entourée de grands peupliers; en face, sur le vieux pont de Meulan, et au-delà du pont, sur la vaste et fertile vallée de la

Seine. La maison, point trop petite, était modeste et modestement arrangée ; des deux côtés en sortant de la salle à manger, de grands arbres et des massifs d'arbustes, sur les derrières et au-dessus de la maison, un jardin planté sans art, mais coupé par des allées montantes le long du coteau et bordées de fleurs. Au bout du jardin, un petit pavillon, bon pour lire seul ou pour causer à deux.

GUIZOT.

### III.—GRAMMAR.

1. Write in the plural :—

- (a) Un petit détail curieux.
- (b) Un oiseau tout bleu.
- (c) Lui, qui n'a peur de rien.
- (d) C'est toi qui fais tout.
- (e) Ce monsieur a répondu lui-même.
- (f) Ce bijou ne vaut pas cher.

2. Translate : *he gives it to me ; I give it to him ; give it, but do not sell it*, and explain fully the rules for the position of the pronoun *le*.

3. Write the third person singular of the present indicative and of the present subjunctive of *paraître, prendre, saisir, rompre, plaindre, valoir*.

4. Give the feminine form of *liseur, lecteur, intérieur*, and the general rule for the formation of each.

5. Translate the following sentences both with *devoir* and with *falloir* : *I must write, I have had to write, I ought to write*.

TUESDAY, 2nd April 1901.—3 to 6 P.M.

I. Translate into French :—

(a) Where should the scholar live ? In solitude or in society ? In the green stillness of the country, where he can hear the heart of Nature beat ; or in the dark, grey city, where he can

hear and feel the throbbing heart of man? I will make answer for him, and say, in the dark, grey city. Oh, they do greatly err who think that the stars are all the poetry which cities have; and therefore, that the poet's only dwelling should be in sylvan solitudes, under the green roof of trees. Beautiful, no doubt, are all the forms of Nature, when transfigured by the miraculous power of poetry. . . . But, after all, what are these but the decorations in the great theatre of human life? What are they but the coarse materials of the poet's song? Glorious, indeed, is the world of God around us,—but more glorious the world of God within us. There lies the land of song; there lies the poet's native land.—LONGFELLOW.

- (b) 1. He has just bought a book and he is now going to read it.  
 2. I know your brother, but I do not know where he is.  
 3. It is cold this morning, but we are very warm.  
 4. The ladies set out at noon and arrived at midnight.  
 5. Are you not going to Paris? Yes, I am.

## II. Translate into English :—

(a) C'était un dimanche. Le pâtre alla conduire son troupeau au pâturage, et Alfred resta assis auprès du foyer, nettoyant son arc et ses flèches. Il était absorbé dans ce travail, ou plutôt dans les tristes pensées qui naissaient dans son âme à la vue de ses armes. Cependant, la femme du bouvier avait compté sur lui pour surveiller et pour retourner au besoin quelques pains placés sur la cendre chaude. Retenue elle-même hors de la cabane par d'autres soins, elle vit, avec colère, à son retour, qu'Alfred n'avait pas bougé de sa place, tandis que les pains brûlaient déjà; et elle s'écria vivement: "Homme! qui que tu sois! à quoi penses-tu donc? es-tu trop fier pour retourner nos pains? Tu ne veux pas y faire attention maintenant, mais je sais bien que tu voudras en manger tout à l'heure."—(GUIZOT).



(b) Connaissez-vous cette contrée que l'on a surnommée le jardin de la France, ce pays où l'on respire un air si pur dans les plaines verdoyantes arrosées par un grand fleuve ? Si vous avez traversé, dans les mois d'été, la belle Touraine, vous aurez longtemps suivi la Loire paisible avec enchantement, vous aurez regretté de ne pouvoir déterminer, entre les deux rives, celle où vous choisirez votre demeure, pour y oublier les hommes auprès d'un être aimé. Lorsque l'on accompagne le flot jaune et lent du beau fleuve, on ne cesse de perdre ses regards dans les riants détails de la rive droite. Des vallons peuplés de jolies maisons blanches qu'entourent des bosquets, des coteaux jaunis par les vignes ou blanchis par les fleurs du cerisier, de vieux murs couverts de chèvrefeuilles naissants, des jardins de roses d'où sort tout à coup une tour élancée, tout rappelle la fécondité de la terre ou l'ancienneté de ses monuments, et tout intéresse dans les œuvres de ses habitants industriels.

(ALFRED DE VIGNY.)

### III. GRAMMAR.

1. Write the following in the plural :—

- |                     |                        |
|---------------------|------------------------|
| (a) Le cheval gris. | (d) Le gentilhomme.    |
| (b) Ce clou de fer. | (e) C'est lui qui ira. |
| (c) Sa grand'mère.  | (f) Un sujet loyal.    |

2. Give the comparative and the superlative of the following :—

Bon, mauvais, petit ; bien, mal, peu.

3. From *six* of the following nouns and adjectives form verbs and give their meanings :—

Croix, courage, bras, maître, merci ;  
franc, doux, gai, pur, beau.

4. Write the first person singular and plural of the following :—

- (a) Present Indicative of *mener*.  
(b) Imperfect Indicative of *manger*.

(c) Preterite (past definite) of *venir*.

(d) Future Indicative of *savoir*.

(e) Present Subjunctive of *aller*.

(f) Imperfect Subjunctive of *devoir*.

5. Translate, giving special attention to the form and position of the pronouns:—

(a) Give it to me.

(b) Do not give it to me.

(c) Carry it to them.

(d) Go without them.

(e) I shall tell it to her.

(f) He and I are poor.

## GERMAN.

WEDNESDAY, 3rd October 1900.—3 to 6 P.M.

I. Translate into German:—

(a) One day Philip II. was taking a walk inside the palace. An honest artisan, who saw the door open, went in. Delighted with the beautiful paintings which decorated the palace, he hastened up to the king, whom he took to be a servant, and asked him to explain to him the various pictures. This the latter did, and on his departure the stranger said: "I thank you heartily, friend, for the trouble you have taken; I live in St. Martin, and am called Juan Perez. If you ever chance to come in my direction, visit me, and a good glass of wine will always be at your disposal." "And my name," said the supposed servant, "is Philip II. of Spain, and if you ever come to Madrid, you can have a glass of wine, which is not worse than yours."

(b) 1. He should not have committed such a crime.

2. Both my sisters are married to wealthy merchants.

3. You will succeed if you work hard.

4. I am told that he belongs to Cologne.

5. He looked so sad that I endeavoured to console him.

II. Translate into English:—

(a) Sie sehen träumend nach einem kunstvollen Deckengemälde, auf welchem Männer mit Schwertern und Lanzen gegen eine Schar aus den Wolken kommender Verittener kämpften. Es war einst, so lautete die Erklärung, eine räuberische Bande in dem Kriege zwischen Tirol und Venedig, unterschiedlos mordend, sengend, plündernd in das friedliche Felsenthal eingefallen. In elender Noth und Bedrängniß habe sich die fromme Gemeinde an die heilige Jungfrau flehentlich gewendet. Diese, erbarmungsvoll wie immer, habe aus gerade vorhandenem Nebel und Wolken Kriegersleute, Reiter gebildet, gegen welche sich die Venediger zu schlagen glaubten, bis sie dann vor der vermeintlichen Übermacht in ihr Land zurückwichen.

(b) Goethe hatte die Dinge fest vor Augen als ganze Gestalten; indem er sie beschreibt oder sie reden läßt, erscheinen sie so lebhaftig, als ließen sie sich fassen; das nennen wir realistisch. Schiller besaß diese malerische Anschauung nicht in so hohem Grade. Er hüllte seine Personen in kostbare Gewänder, aber deren Falten verschwimmen oft ein wenig, und das erscheint dann als das ideale. Er wußte es recht gut und sprach es aus. Er kannte die Grenzen seiner Kunst. Er traute sich weniger zu, als er vermochte. Beim Klang der Goethe'schen Verse fühlt man, daß jedes Wort eine Nothwendigkeit war, bei Schiller stehen die Gedanken fester als die Verse, in die er sie kleidete.

III. GRAMMAR.

1. Form abstract nouns from any *six* of the following adjectives:—treu, geheim, weise, fromm, munter, bereit, fest, voll, wild, kurz, tugendhaft.

2. Write the third singular present indicative and imperfect subjunctive of lesen, erbitten, ausgehen, reden, anerkennen.

3. Express in German the following hours:—12.30, 4.15, 8.57, 9.45, 6.3.

4. In how many different ways can “but” be rendered in German? Give examples of each.

5. Give the English etymological equivalents of any *six* of the following:—Spur, streng, Buche, eigen, frisch, Heide, Lager, sterben, Talg.

WEDNESDAY, 3rd April 1901.—3 to 6 P.M.

**I. Translate into German:—**

(a) Llewelyn was a famous huntsman, and he had a beautiful hound called Gelert. He had also a little son who loved the faithful dog and played with him daily. One morning Llewelyn went a-hunting. On the way he noticed that Gelert was not with the other hounds. The hunt was unsuccessful. As Llewelyn returned in the evening, tired and vexed, Gelert met him, and he saw that the dog was covered with blood. The father hastened to his child's room, and there he found the cradle overturned, the floor bespattered with blood, and the child not to be seen. Then he thought with horror: “My child is dead; the dog has devoured him;” and he plunged his sword into Gelert's heart. The yell of the dying animal was answered by the cry of the child, whom the father found unharmed beneath the cradle. There, too, lay a great wolf, torn and dead, which the faithful dog had slain.—ANON.

- (b) 1. When he was in London he saw the Emperor.  
 2. The sun rises in the East and sets in the West.  
 3. I shall be obliged to go out this morning.  
 4. I beg you, do that for my sake.  
 5. Did you meet my father in town to-day?

**II. Translate into English:—**

(a) Ich glaube, ich kann mich noch erinnern, als ich zum ersten

mal die Sterne sah. Sie mögen mich schon oft vorher gesehen haben, aber eines Abends da war es mir, als wäre es kalt, obgleich ich meiner Mutter im Schoße lag — und es schüttelte mich, und ich fror, oder ich fürchtete mich; kurz es ging etwas in mir vor, was mein kleines Ich mehr als gewöhnlich auf sich aufmerksam machte. Da zeigte mir die Mutter die hellen Sterne, und ich wunderte mich und dachte, das hat doch die Mutter recht hübsch gemacht. Und dann fühlte ich mich wieder warm, und mag wohl eingeschlafen sein.—MAX MÜLLER.

(*h*) Die Sonne ging auf. Die Nebel flohen wie Geister bei dem dritten Hahnenſchrei. Ich stieg wieder bergauf und bergab, und vor mir schwebte die schöne Sonne, immer neue Schönheiten beleuchtend. Der Geist des Gebirges begünstigte mich ganz offenbar; er wußte wohl, daß so ein Dichtermensch viel Hübsches wiedererzählen kann, und er ließ mich diesen Morgen seinen Harz sehen, wie ihn gewiß nicht Jeder sah. Aber auch mich sah der Harz, wie mich nur wenige gesehen, in meinen Augenvimpern flimmerten ebenso kostbare Perlen, wie in den Gräsern des Thals. Morgenthau der Liebe feuchtete meine Wangen, die rauschenden Tannen verstanden mich, ihre Zweige thaten sich von einander, bewegten sich herauf und herab, gleich stummen Menschen, die mit den Händen ihre Freude bezeigen, und in der Ferne klang's wunderbar geheimnißvoll, wie Glockengeläute einer verlornen Waldkirche. Man sagt, das seien die Heerdenglöckchen, die im Harz so lieblich, klar und rein gestimmt sind.—HEINE.

### III. GRAMMAR.

1. Tabulate the nominative singular, the genitive singular, and the nominative plural of the following nouns, giving the article in each case:—

Name, Haus, Nacht, Auge, Vetter, Mauer.

2. Tabulate the 3rd sing. pres. indic., 1st sing. imperf. indic., and 1st pl. perfect indic. of the following verbs:—

gehen, abreißen, antworten, beten, bieten, bitten.

3. Give the meanings of the following verbs, showing clearly the effect of the prefix :—

- |              |     |              |
|--------------|-----|--------------|
| (a) achten   | and | verachten.   |
| (b) ehren    | and | verehren.    |
| (c) heiraten | and | verheiraten. |
| (d) jagen    | and | erjagen.     |
| (e) trinken  | and | ertrinken.   |
| (f) fahren   | and | erfahren.    |

4. Mention six prepositions which may govern either the dative or the accusative, and give short sentences to illustrate the difference in meaning.

5. Explain, with examples, the difference in the use of *du*, *ihr*, and *Sie*, as employed in ordinary conversation, in literature, and in prayer.

## Papers for Ordinary Degree of M.A.

### I.—LANGUAGE AND LITERATURE.

#### LATIN.

TUESDAY, 2nd April 1901.—9 to 11 A.M.

1. Translate:—

Horam amplius iam in demoliendo signo permulti homines moliebantur; illud interea nulla lababat ex parte, cum alii vectibus subiectis conarentur commovere, alii deligatum omnibus membris rapere ad se funibus. ac repente Agrigentini concurrunt; fit magna lapidatio; dant sese in fugam istius praeclari imperatoris nocturni milites: duo tamen sigilla perparvola tollunt, ne omnino inanes ad istum praedonem religionum revertantur. numquam tam male est Siculis quin aliquid facete



et commodè dicant, velut in hac re aiebant in labores Herculis non minus hunc immanissimum verrem, quam illum aprum Erymanthium referri oportere.

Translate and explain :—

(a) quem taurum cum Scipio redderet Agrigentinis, dixisse dicitur æquum esse illos cogitare, utrum esset utilius, suisne servire anne populo Romano obtemperare.

(b) quid arbitramini Reginos, qui iam cives Romani sunt, merere velle, ut ab iis marmorea Venus illa auferatur?

2. Translate :—

Quæ contra breviter fata est Amphrysia vates :  
nullæ hic insidiæ tales ; absiste moveri ;  
nec vim tela ferunt : licet ingens ianitor, antro  
aeternum latrans, exsanguis terreat umbras :  
casta licet patrui servet Proserpina limen.

Troïus Aeneas, pietate insignis et armis,  
ad genitorem imas Erebi descendit ad umbras.  
si te nulla movet tantæ pietatis imago,  
at ramum hunc (aperit ramum qui veste latebat)  
agnosceas. tumida ex ira tum corda residunt ;  
nec plura his. ille, admirans venerabile donum  
fatalis virgæ, longo post tempore visum,  
caeruleam advertit puppim, ripæque propinquat.

Translate, with short notes :—

(a) velocem Mnestheus agit acri remige Pristim,  
mox Italus Mnestheus, genus a quo nomine Memmi.

(b) extremus galeaque ima subsedit Aeestes.

(c) Albani docuere suos ; hinc maxima porro  
accepit Roma et patrium servavit honorem,  
Troiaque nunc pueri, Troianum dicitur agmen.

(d) aggeribus socer Alpinis atque arce Monoeci  
descendens, gener adversis instructus Eois

## 3. Translate:—

(a) Nimirum sapere est abiectis utile nugis,  
 et tempestivum pueris concedere ludum,  
 ac non verba sequi fidibus modulanda Latinis,  
 sed verae numerosque modosque ediscere vitae.  
 quocirca mecum loquor haec tacitusque recordor :  
 si tibi nulla sitim finiret copia lymphae,  
 narrares medicis : quod, quanto plura parasti,  
 tanto plura cupis, nulline faterier audes ?  
 si volnus tibi monstrata radice vel herba  
 non fieret levius, fugeres radice vel herba  
 proficiente nihil curarier : audieras, cui  
 rem di donarent, illi decedere pravam  
 stultitiam ; et, cum sis nihilo sapientior, ex quo  
 plenior es, tamen uteris monitoribus isdem ?

(b) Nam quae nivali pascitur Algidio  
 devota quercus inter et ilices  
     aut crescit Albanis in herbis  
         victima, pontificum secures  
 cervice tinguet : te nihil attinet  
 temptare multa caede bidentium  
     parvos coronantem marino  
         rore deos fragilique myrto.  
 immunis aram si tetigit manus,  
 non sumptuosa blandior hostia,  
     mollivit aversos Penates  
         Farre pio et saliente mica.

Translate, with short notes, *one* of the following :—

(a) unde simul primum me dimisere Philippi,  
 decisis humilem pennis inopemque paterni  
 et laris et fundi, paupertas impulit audax  
 ut versus facerem.

(b) dicar, qua violens obstreperit Aufidus

et qua pauper aquae Daunus agrestium  
regnabit populorum, ex humili potens,  
princeps Aeolium carmen ad Italos  
deduxisse modos.

4. Translate :—

“Ego me, patres conscripti, mortalem esse et hominum officia fungi satisque habere, si locum principem impleam, et vos testor et meminisse posteros volo; qui satis superque memoriae meae tribuent, ut maioribus meis dignum, rerum vestrarum providum, constantem in periculis, offensionum pro utilitate publica non pavidum credant. haec mihi in animis vestris templa, haec pulcherrimae effigies et mansurae: nam quae saxo struuntur, si iudicium posterorum in odium vertit, pro sepulcris spernuntur. proinde socios cives et deos ipsos precor: hos, ut mihi ad finem usque vitae quietam et intelligentem humani divinique iuris mentem dunt; illos, ut, quandoque concessero, cum laude et bonis recordationibus facta atque famam nominis mei prosequantur.”

5. Answer *any two* of the following questions :—

1. Give a short account of the nature and history of the Praetorship and the Censorship.
2. Compare the political and social condition of Rome at the close of the third and second centuries before Christ (220-200 and 120-100 B.C.).
3. What does Tacitus tell us about the following persons :—  
Cremutius Cordus, Latinius Latiaris, Seianus?
4. Describe the position of the Senate under the Empire.

6. Answer *any one* of the following questions :—

1. Illustrate from the Fourth Verrine Oration Cicero's qualities as an advocate and an orator.
2. Compare the Fifth and Sixth books of the *Aeneid* in regard to the general interest of the narrative, and

their importance as revealing Virgil's views about human life and the destiny of Rome.

3. What is Horace's attitude towards Augustus? What ideas of the Emperor's does he express?
4. Write a short account of the life of Tacitus. What is known about his oratory? What is his estimate of the Emperors under whom he lived?

## SECOND PAPER.

TUESDAY, *2nd April* 1901.—11.30 to 1.30 o'clock.

### 1. For Prose Composition :—

Titus was beloved by the Romans, and those whom the Romans loved ever died young. Fate, indeed, did not always require that they should suffer; but the career of Titus was not only brief but remarkable in its latter years for a series of public disasters. In the first place the city was visited by a terrible conflagration, which raged unchecked for three days. The Capitol itself fell once more a prey to the flames. Again Rome suffered from a pestilence, in which, if one may credit the historians of the time, ten thousand persons perished daily. The great eruption of Vesuvius, which overwhelmed the cities of Campania, was perhaps more alarming, though the loss it inflicted might be less. This calamity, as is well known, has been described to us by the younger Pliny, whose uncle perished in his own house on the promontory of Misenum. Herculaneum and Pompeii were completely destroyed by the eruption; while other towns between them and around them suffered but little from the disaster.

### 2. Translate into English :—

Thybrī, doce verum. tua ripa vetustior Urbe est:  
principium ritus tu bene nosse potes.

Thybris arundiferum medio caput extulit alveo

raucaque dimovit talibus ora sonis :  
 haec loca desertas vidi sine moenibus herbas :  
 pascebat sparsas utraque ripa boves.  
 et quem nunc gentes Tiberim noruntque timentque,  
 tunc etiam pecori despiciendus eram.  
 Arcadis Euandri nomen tibi saepe refertur  
 ille meas remis advena torsit aquas.  
 venit et Alcides, turba comitatus Achiva.  
 Albula, si memini, tunc mihi nomen erat.  
 excipit hospitio iuvenem Pallantius heros :  
 et tandem Caco debita poena venit.  
 victor abit, secumque boves, Erytheida praedam,  
 abstrahit. at comites longius ire negant.  
 magnaue pars horum desertis venerat Argis.  
 montibus his ponunt spemque laremque suum.  
 saepe tamen patriae dulci tanguntur amore,  
 atque aliquis moriens hoc breve mandat opus :  
 “ mittite me in Tiberim : Tiberinis vectus in undis  
 litus ad Inachium pulvis inanis eam.”

## GREEK.

### FIRST PAPER.

WEDNESDAY, 3rd April 1901. 9 to 11 A.M.

#### 1. (a) Translate :—

Τὸν δ' ἀπαραιβόμενος προσέφη πόδας ὠκὺς Ἀχιλλεύς  
 “ Ἀτρεΐδῃ κύδιστε, ἄναξ ἀνδρῶν Ἀγάμεμνον,  
 ἄλλοτὲ περ καὶ μᾶλλον ὀφέλλεστε πύττα πένεσθαι,  
 ὁππότε τις μεταπανσῶλῃ πολέμοιο γένηται  
 καὶ μένος οὐτόσον ᾗσιν ἐνὶ στήθεσσιν ἐμοῖσιν.  
 νῦν δ' οἱ μὲν κέεται δεδαῖγμένοι, οὓς ἐδάμασσαν  
 Ἐκτώρ Πριαμίδης, ὅτε οἱ Ζεὺς κῦδος ἔδωκεν,

ὕμεις δ' ἐς βρωτὺν ὀτρύνετον· ἦ τ' ἂν ἔγωγε  
 νῦν μὲν ἀνώγοιμι πτολεμίζου νῆας Ἀχαιῶν  
 νήστιας, ἀκμήνους, ἅμα δ' ἡελίῳ καταδύντι  
 τεύξεσθαι μέγα δόρπον, ἐπὴν τιταίμεθα λῶβην.  
 πρὶν δ' οὐπὼς ἂν ἔμοιγε φίλον κατὰ λαιμὸν ἰεῖν  
 οὐ πόσις οὐδὲ βρώσις, ἑταίρου τεθνηῶτος,  
 ὅς μοι ἐνὶ κλισίῃ δεδαῖγμένος ὀξέϊ χαλκῷ  
 κεῖται, ἀνὰ πρόθυρον τετραμμένος, ἀμφὶ δ' ἑταῖροι  
 μύρονται· τό μοι οὐτι μετὰ φρεσὶ ταῦτα μέμηλεν,  
 ἀλλὰ φόνος τε καὶ αἶμα καὶ ἀργαλέος στόνος ἀνδρῶν."

(b) Translate, with notes on points of syntax:—

(1) οὐ μὲν γάρ τι κακώτερον ἄλλο πάθοιμι.

(2) ἐν δέ οἱ ἦτορ

δὺν' ἄχος ἄτλητον.

(3) ἄκμηνον πόσις καὶ ἐδητύος.

(c) Scan the following lines, noting anything metrically remarkable:—

(1) θυμοβόρῳ ἔριδι μενέηναμεν εἵνεκα κούρης.

(2) σὸν γένος· οὐ οἱ ἀεικὲς ἀνάσσεμεν Ἀργείοισιν.

(3) αὐτοῦ ἐνὶ Τροίῃ, σὲ δέ τε Φθίῃνδε νέεσθαι.

2. (a) Translate:—

Σκόπει δὲ καὶ νῦν, ὡς προθύμως καὶ παρακινδυνευτικῶς μέλλω  
 λέγειν, ὅτι τοῦναντίον ἢ νῦν δεῖ τοῦ ἐπιτηδείματος τούτου πόλιν ἄπτεσ-  
 θαι. Πῶς; Νῦν μὲν, ἦν δ' ἐγώ, οἱ καὶ ἀπτόμενοι μεράκια ὄντα ἄρτι  
 ἐκ παίδων τὸ μεταξὺ οἰκονομίας καὶ χρηματισμοῦ πλησιάζαντες αὐτοῦ  
 τῷ χαλεπωτάτῳ ἀπαλλάττονται, οἱ φιλοσοφώτατοι ποιοῦμενοι· λέγω  
 δὲ χαλεπώτατον τὸ περὶ τοὺς λόγους· ἐν δὲ τῷ ἔπειτα, ἔαν καὶ ἄλλων  
 τοῦτο πραττόντων παρακαλούμενοι ἐθέλωσιν ἀκροατὰί γίγνεσθαι,  
 μεγάλα ἡγοῦνται, πάρεργον οἰόμενοι αὐτὸ δεῖν πράττειν· πρὸς δὲ τὸ  
 γῆρας ἐκτὸς δὴ τινων ὀλίγων ἀποσβέννυνται πολὺ μᾶλλον τοῦ  
 Ἡρακλειτείου ἡλίου, ὅσον αἰθῆς οὐκ ἐξάπτονται. Δεῖ δέ πῶς; ἔφη.  
 Πᾶν τοῦναντίον μεράκια μὲν ὄντα καὶ παίδας μερακιώδη παιδείαν  
 καὶ φιλοσοφίαν μεταχειρίζεσθαι, τῶν τε σωματίων, ἐν ᾧ βλαστάνει



τε καὶ ἀνδρουῦνται, εὖ μάλα ἐπιμελεῖσθαι, ὑπηρεσίαν φιλοσοφίᾳ κτωμένους· προϋούσης δὲ τῆς ἡλικίας, ἐν ᾗ ἡ ψυχὴ τελειοῦσθαι ἄρχεται, ἐπιτείνειν τὰ ἐκείνης γυμνάσια· ὅταν δὲ λήγῃ μὲν ἡ ῥώμη, πολιτικῶν δὲ καὶ στρατειῶν ἐκτὸς γίγνηται, τότε ἤδη ἀφέτους νέμεσθαι καὶ μηδὲν ἄλλο πράττειν, ὅ τι μὴ πάρεργον, τοὺς μέλλοντας εὐδαιμόνως βιώσεσθαι καὶ τελευτήσαντας τῷ βίῳ τῷ βεβιωμένῳ τὴν ἐκεῖ μοῖραν ἐπιστησεῖν πρέπουσαν.

3. (a) Translate:—

EP. κλύω σ' ἐγὼ μεμνηότ' οὐ σμικρὰν νόσον.

HP. νοσοῖμ' ἂν, εἰ νόσημα τοὺς ἐχθροὺς στυγείν.

EP. εἴης φορητὸς οὐκ ἂν, εἰ πράσσοις καλῶς.

HP. ὦμοι.

EP. τόδε Ζεὺς τοῦπος οὐκ ἐπίσταται.

HP. ἀλλ' ἐκδιδάσκει πάνθ' ὁ γηράσκων χρόνος.

EP. καὶ μὴν σύ γ' οὐπω σωφρονεῖν ἐπίστασαι.

HP. σὲ γὰρ προσηύδων οὐκ ἂν ὄνθ' ὑπηρέτην.

EP. ἐρεῖν ἔοικας οὐδὲν ὦν χρήξει πατήρ.

HP. καὶ μὴν ὀφείλων γ' ἂν τίνοιμ' αὐτῷ χάριν.

EP. ἐκερτόμησας δῆθεν ὥς παῖδ' ὄντα με.

HP. οὐ γὰρ σὺ παῖς τε κἄτι τοῦδ' ἀνούστερος,  
εἰ προσδοκᾷς ἐμοῦ τι πεύσεσθαι πάρα;  
οὐκ ἔστιν αἴκισμ' οὐδὲ μηχάνημ' ὅτῳ  
προτρέψεται με Ζεὺς γεγωνῆσαι τάδε,  
πρὶν ἂν χαλασθῇ δεσμὰ λυμαντήρια.

Scan λευκοπτέρῳ δὲ νιφάδι καὶ βροντήμασι  
χθονίοις κυκάτω πάντα καὶ ταρασσέτω·

(b) Translate, with short comments, and state the context in each case:—

(1) τοὺς προδότας γὰρ μισεῖν ἔμελλον.

(2) τὸ κηδεῦσαι καθ' ἑαυτὸν ἀριστεύει μακρῶ.

(3) σύθην δ' ἀπέδιλος ὄχῳ πτερωτῶ.

(4) ἐξελυσάμην βροτοῦς

τὸ μὴ διαρραισθέντας εἰς Ἀιδου μολεῖν.

## 4. (a) Translate:—

Καὶ ἐλασσοῦμενοι γὰρ ἐν ταῖς ξυμβολαίαις πρὸς τοὺς ξυμμάχους δίκαις καὶ παρ' ἡμῖν αὐτοῖς ἐν τοῖς ὁμοίοις νόμοις ποιήσαντες τὰς κρίσεις φιλοδικεῖν δοκοῦμεν. καὶ οὐδεὶς σκοπεῖ αὐτῶν, τοῖς καὶ ἄλλοθί που ἀρχὴν ἔχουσι καὶ ἦσσαν ἡμῶν πρὸς τοὺς ὑπηκόους μετρίοις οἷσι διότι τοῦτο οὐκ ὀνειδίζεται· βιάζεσθαι γὰρ οἷς ἂν ἐξῆ, δικάζεσθαι οὐδὲν προσδέονται. οἱ δὲ εἰθισμένοι πρὸς ἡμᾶς ἀπὸ τοῦ ἴσου ὀμιλεῖν, ἢν τι παρὰ τὸ μὴ οἶεσθαι χρήναι ἢ γνώμῃ ἢ δυνάμει τῇ διὰ τὴν ἀρχὴν καὶ ὅπως οὖν ἐλασσωθῶσιν, οὐ τοῦ πλέονος μὴ στερισκόμενοι χάριν ἔχουσιν, ἀλλὰ τοῦ ἐνδεοῦς χαλεπώτερον φέρουσιν ἢ εἰ ἀπὸ πρώτης ἀποθέμενοι τὸν νόμον φανερώς ἐπλεονεκτοῦμεν. ἐκείνως δ' οὐδ' ἂν αὐτοὶ ἀντέλεγον ὥς οὐ χρεὼν τὸν ἦσσω τῷ κρατοῦντι ὑποχωρεῖν.

## (b) Translate, with brief notes:—

(1) ἔστι γὰρ καὶ Ἀθηναίοις Διάσια, ἃ καλεῖται Διὸς ἑορτὴ Μειλιχίου μεγίστη, ἕξω τῆς πόλεως, ἐν ᾗ πανδημεὶ θύουσι, πολλοὶ οὐχ ἱερεῖα, ἀλλὰ θύματα ἐπιχώρια.

(2) ὥς δ' ἂν ἐδόκουν ἐμοὶ ἕκαστοι περὶ τῶν αἰὲ παρόντων τὰ δέοντα μάλιστ' εἰπεῖν, ἐχομένῳ ὅτι ἐγγύτατα τῆς ξυμπάσης γνώμης τῶν ἀληθῶς λεχθέντων, οὕτως εἴρηται.

(3) δεδιώς τε ἔπρασεν ἔς τε τὴν Λακεδαίμονα πέμπων ὅπως πόλεμος γένηται αὐτοῖς πρὸς Πελοποννησίους, καὶ τοὺς Κορινθίους προσεποιεῖτο τῆς Ποτιδαίας ἕνεκα ἀποστάσεως.

## HISTORY.

5. Write briefly on *two* of the following subjects:—

- (a) The foreign and domestic policy of Pericles.
- (b) The origin of the Sicilian expedition.
- (c) The battle of Salamis.
- (d) Alkibiades.

## LITERATURE.

6. Write briefly on *one* of the following subjects:—

- (a) Attic Tragedy before Aeschylus.

- (b) Thucydides' conception of History.
- (c) Greek Choral Poetry.
- (d) The Ideal Theory of Plato.

SECOND PAPER.

WEDNESDAY, 3rd April 1901.—11.30 to 1.30.

1. For Greek Prose:—

I have given the stories of the early kings and founders of Rome in their own proper form; not wishing any one to mistake them for real history, but thinking them far too famous and too striking to be omitted. But what is the real history, in the place of which we have so long admired the tale of Romulus and Numa? This is a question which cannot be satisfactorily answered: I shall content myself here with giving the few points that seem sufficiently established; referring those who desire to go deeply into the whole question, to that immortal work of Niebuhr, which has left other writers nothing else to do, except either to copy or to abridge it. The first question in the history of every people is, What was their race and language? the next, What was the earliest form of their society, their social and political organisation? Let us see how far we can answer these questions with respect to Rome.

2. Translate (Unseen):—

εἶτα τὸν τοῦτο τὸ μηχανήμα ἐπὶ τὴν πόλιν ἱστάντα, τοῦτον εἰρήνην ἄγειν ἐγὼ φῶ πρὸς ὑμᾶς; πολλοῦ γε καὶ δέω, ἀλλ' ἀφ' ἧς ἡμέρας ἀνείλε Φωκίας, ἀπὸ ταύτης ἔγωγ' αὐτὸν πολεμεῖν ὀρίζομαι. ὑμᾶς δὲ, ἐὰν μὲν ἀμύνησθε ἡδὴ, σωφρονήσκειν φημι, ἐὰν δ' ἐάσητε, οὐδὲ τοῦθ' ὅταν βοήλησθε ἀννήγεσθε ποιησάι. καὶ τοιοῦτόν γε ἀφίστηκα τῶν ἄλλων, ὃ ἄνδρες Ἀθηναῖοι, τῶν συμβουλευόντων ὥστ' οὐδὲ δοκεῖ μοι περὶ Χερρονήσου νῦν σκοπεῖν οὐδὲ Βυζαντίου, ἀλλ' ἐπαμῦναι μὲν τούτοις, καὶ διατηρῆσαι μή τι πάθωσι, καὶ τοῖς οὖσιν ἐκεῖ νῦν στρατιώταις πᾶνθ' ὅσων ἂν δέωνται ἀποστεῖλαι,

βουλεύεσθαι μέντοι περὶ πάντων τῶν Ἑλλήνων ὡς ἐν κινδύνῳ  
μεγάλῃ καθεστῶτων. βούλομαι δ' εἰπεῖν πρὸς ὑμᾶς ἐξ ὧν ὑπὲρ τῶν  
πραγμάτων οὕτω φοβοῦμαι, ἵν' εἰ μὲν ὀρθῶς λογίζωμαι, μετέσχητε  
τῶν λογισμῶν καὶ πρόνοιάν τιν' ὑμῶν γ' αὐτῶν, εἰ μὴ καὶ τῶν ἄλλων  
ἄρα βούλεισθε, ποιήσησθε, εἰ δὲ ληρεῖν καὶ τετυφῶσθαι δοκῶ, μήτε  
νῦν μήτ' αὖθις ὡς ὑγιαίνοντί μοι προσέχητε.

## RHETORIC AND ENGLISH LITERATURE.

### FIRST PAPER.

SATURDAY, 30th March 1901.—11.30 A.M. to 1.30 P.M.

1. Write an Essay on *one* of the following subjects:—
  - (a) Shakespeare's handling of the supernatural in *A Midsummer Night's Dream* and *Macbeth*.
  - (b) The Rhetoric of Dryden.
  - (c) The Style and Versification of Browning.
2. How far are classical and modern ideas of Rhetoric the same?
3. What advantages does English lose by being so largely analytic?
4. Describe the blending of romance and humour in Chaucer.
5. What are the main principles, and the main varieties, of alliterative verse in English?
6. Give a note on one author from each of the following groups:—(a) Clarendon, Gibbon, Macaulay; (b) Thomas Nash, Christopher Smart, Thomas Lovell Beddoes.
7. Survey the contribution of the eighteenth century *either* to English Fiction *or* to English Comedy.
8. Give briefly the authorship, approximate date, and characteristics of *two* of the following:—*The Brut*, *Pearl*, *Colin Clout's Come Home Again*, *The Pleasures of Imagination*; and of *two* of the following: *The New Atlantis*, *The Drapier's Letters*,

*Rasselas, Crotchet Castle, Murder as one of the Fine Arts, The Ordeal of Richard Feverel.*

SECOND PAPER.

SATURDAY, 30th March 1901.—2 to 4 P.M.

[From SIX to EIGHT Questions should be attempted.]

1. How is the character of Macbeth affected or disclosed by his dealings with the witches?
2. Discuss, with short illustrative extracts, any supposed contemporary allusions in the *Midsummer Night's Dream*. State the context in each case.
3. Narrate, explaining the allegory and commenting on the poetry, the final voyage to the Bower of Aerasia.
4. Give Milton's allusion to the *Squire's Tale*, and explain each name and reference in it.
5. Write a short appreciation of the style of *Comus*, giving references, but not long quotations.
6. Describe precisely the metre of *Lycidas*, showing how it accompanies the sentiment.
7. Write a short criticism either of *Absalom and Achitophel* (part I) or of *MacFlecknoe*.
8. Consider the satiric manner of Pope, comparing it with Dryden's.
9. How does Johnson's style of criticism differ from more modern kinds?
10. How far are the deficiencies of Wordsworth's writing sheltered by the definition of poetry as a "criticism of life"?
11. Annotate: "the Grekes hors Synon"—"for it is pryme"—"belgards and amorous retrate"—"Troynovant"—"the gardin of Proserpina this hight"—"under him my Genius is rebuk'd"—"violent sorrow seems a modern ecstasy"—"O, come in, equivocator"—"Sweet Queen of Parley, Daughter of

the Sphere"—"Sabrina fair"—"the ruin of our corrupted clergy then in their height"—"the fable of Bellerus old."

12. Annotate :

- (a) "Each household Genius shows again his face,  
And from the hearths the little Lares creep."
- (b) "Among the timorous kind the quaking Hare  
Professed neutrality, but would not swear."
- (c) "Forgot his Epic, nay Pindaric art,  
But still I love the language of his heart."
- (d) "He helped to bury whom he helped to starve."
- (e) "*Ferret immensusque ruit.* All the stanzas indeed are not equal. An imperial crown cannot be one continued diamond."
- (f) "Between Roman images and English manners there will be an irreconcilable dissimilitude."

13. State summarily the leading thought of *two* of the following poems: *Ode to Duty*, *Sonnets on the Sonnet*, *Expostulation and Reply*, *Anecdote for Fathers*: and of *two* of the following: *Abt Vogler*, *Youth and Art*, *Rabbi Ben Ezra*, *Prospire*.

14. Indicate, with examples, Browning's gains and losses by his indulgence in the grotesque.

## FRENCH.

### FIRST PAPER.

SATURDAY, 6th April 1901.—9 to 11 A.M.

1. Translate into English:—

*Lettre à une femme pendant le Siège de Paris.*

- (a) Paris terrible et gai combat. Bonjour, madame.  
On est un peuple, on est un monde, on est une âme.  
Chacun se donne à tous et nul ne songe à soi.  
Nous sommes sans soleil, sans appui, sans effroi.



Tout ira bien pourvu que jamais on ne dorme.  
 Schmitz fait des bulletins plats sur la guerre énorme ;  
 Nous mangeons du cheval, du rat, de l'ours, de l'âne.  
 Paris est si bien pris, cerné, muré, pavé,  
 Gardé, que notre ventre est l'arche de Noé,  
 Dans nos flancs toute bête, honnête ou mal famée,  
 Pénètre, et chien et chat, le mammon, le pygmée,  
 Tout entre, et la souris rencontre l'éléphant.  
 Plus d'arbre ; on les coupe on les scie, on les fend ;  
 Paris sur ses chenets met les Champs-Élysées.  
 On a l'onglée aux doigts et le givre aux croisées.  
 Plus de feu pour sécher le linge des lavoirs,  
 Et l'on ne change plus de chemise . . .  
 On vit de rien, on vit de tout, on est content.  
 Sur nos tables sans nappe, où la faim nous attend,  
 Une pomme de terre arrachée à sa crypte  
 Est reine, et les oignons sont dieux comme en Égypte.  
 Nous manquons de charbon, mais notre pain est noir.

. . . . .  
 Elles acceptent tout, les femmes de Paris,  
 Leur âtre éteint, leurs pieds par le verglas meurtris,  
 Au seuil noir des bouchers les attentes nocturnes.

. . . . .  
 On fraternise, on rêve un succès, nous offrons  
 Nos cœurs à l'espérance, à la foudre nos fronts.

V. HUGO.

(b) *Ruffin* commence à grisonner ; mais il est sain, il a un visage frais et un oeil vif qui lui promettent encore vingt années de vie ; il est gai, *joyal*, familier, indifférent ; il rit de tout son cœur, et il rit tout seul et sans sujet, il est content de soi, des siens, de sa petite fortune ; il dit qu'il est heureux. Il perd son fils unique, jeune homme de grande espérance, et qui pouvait un jour être l'honneur de sa famille ; il remet sur d'autres le

soin de le pleurer ; il dit : “ Mon fils est mort, cela fera mourir sa mère ’ ; et il est consolé. Il n’a point de passions, il n’a ni amis ni ennemis, personne ne l’embarrasse, tout le monde lui convient, tout lui est propre ; il parle à celui qu’il voit une première fois avec la même liberté et la même confiance qu’à ceux qu’il appelle de vieux amis, et il lui fait part bientôt de ses *quolibets* et de ses historiottes. On l’aborde, on le quitte sans qu’il y fasse attention, et le même conte qu’il a commencé de faire à quelqu’un, il l’achève à celui qui prend sa place.

LA BRUYÈRE.

- (*c*) L’amour, pour l’ordinaire, est peu fait à ces lois,  
 Et l’on voit les amants vanter toujours leur choix.  
 Jamais leur passion n’y voit rien de blâmable,  
 Et, dans l’objet aimé, tout leur devient aimable ;  
 Ils comptent les défauts pour des perfections,  
 Et savent y donner de favorables noms.  
 La pâle est aux jasmins en blancheur comparable ;  
 La noire à faire peur, une brune adorable ;  
 La maigre a de la taille et de la liberté ;  
 La grasse est, dans son port, pleine de majesté ;  
 La malpropre sur soi, de peu d’attraits chargée,  
 Est mise sous le nom de beauté négligée ;  
 La géante paraît une déesse aux yeux ;  
 La naine, un abrégé des merveilles des cieux ;  
 L’orgueilleuse a le cœur digne d’une couronne ;  
 La fourbe a de l’esprit ; la sotte est toute bonne ;  
 La trop grande parleuse est d’agréable humeur ;  
 Et la muette garde une honnête pudeur.  
 C’est ainsi qu’un amant dont l’ardeur est extrême  
 Aime jusqu’aux défauts des personnes qu’il aime.

MOLIÈRE.

(*d*) Il mourut à Cambrai le septième jour de l’année 1745, au milieu des regrets intérieurs, et à la porte du comble de ses

désirs. Il savait l'état tombant du roi, il savait ce qui le regardait après lui. Il était déjà consulté du dedans et recourtsié du dehors, parce que le goût du soleil levant avait déjà percé. Que de puissants motifs de regretter la vie ! et que la mort est amère dans des circonstances si parfaites et si à souhait de tous côtés ! Toutefois il n'y parut pas. Soit amour de la réputation, qui fut toujours un objet auquel il donna toute préférence, soit grandeur d'âme qui méprise enfin ce qu'elle ne peut atteindre, soit dégoût du monde si continuellement trompeur pour lui, et de sa figure qui passe et qui allait lui échapper, soit piété ranimée par un long usage, et ranimée peut-être par ces tristes mais puissantes considérations, il parut insensible à tout ce qu'il quittait, et uniquement occupé de ce qu'il allait trouver, avec une tranquillité, une paix, qui n'excluait que le trouble, et qui embrassait la pénitence, le détachement, le soin unique des choses spirituelles de son diocèse, enfin avec une confiance qui ne faisait que surnager à l'inutilité et à la crainte.

SAINT-SIMON.

- (e) Quand vous serez bien vieille, au soir, à la chandelle,  
Assise auprès du feu, dévidant et filant,  
Direz, chantant mes vers, en vous esmerveillant,  
Ronsard me célébroit du temps que j'étois belle.  
Lors vous n'aurez servante oyant telle nouvelle,  
Desjà sous le labeur à demy sommeillant,  
Qui au bruit de mon nom ne s'aille réveillant,  
Bénissant votre nom de louange immortelle.  
Je seray sous la terre, et, fantosme sans os,  
Par les ombres myrteux je prendray mon repos :  
Vous serez au fouyer une vieille accroupie,  
Regrettant mon amour et votre fier desdain.  
Vivez, si m'en croyez, n'attendez à demain :  
Cueillez dès aujourd'huy les roses de la vie.

RONSARD.

2. Explain what is understood by the Romantic movement; indicate the various causes which helped to produce it, and mention the branches of literature that were most directly affected by it.

3. Assign the following works to their respective authors, and briefly characterise each of them:—

(1) *Cyrano de Bergerac*; (2) *Le Rouge et le Noir*; (3) *Polyeucte*; (4) *Télémaque*; (5) *Les Plaideurs*; (6) *Notre-Dame de Paris*; (7) *Le Génie du Christianisme*; (8) *Cinq-Mars*; (9) *Les Précieuses ridicules*; (10) *La Henriade*.

#### SECOND PAPER.

SATURDAY, 6th April 1901.—11.30 A.M. to 1.30 P.M.

1. Translate into French:—

(a) Thus ended the correspondence between Walpole and Chatterton, Walpole soon forgetting the whole affair, and Chatterton persisting in his belief that, had he not committed the blunder of letting his aristocratic correspondent know that he was a poor widow's son, he would have fared better at his hands. No doubt there was something in this. But, of all unreasonable things ever done by a misjudging public, certainly that of condemning Walpole to infamy for his conduct in this affair and charging on him all the tragic sequel of Chatterton's life is one of the most unreasonable. Why, the probability is that Walpole behaved better than most people would have done in the circumstances! Let any one in the present day fancy how *he* would act if some one utterly unknown to him were to try to impose upon him in a similar way through the post office. Would the mere cleverness of the cheat take away the instinctive frown of resentment, and change it into admiring enthusiasm? That there may possibly have been in London at that time persons of rare goodness, of overflowing tolerance and

compassion, that would have acted differently from Walpole we will not deny. If that time was like the present, however, such men, we fear, must have been very thinly scattered, and very hard to find.—MASSON.

(b) Next day, when the people assembled in the Mosque for morning prayer, Abu Lulu mingled with the first rank of the worshippers. Omar entered, and, as customary, took his stand in advance of the congregation, having his back towards them. No sooner had he begun the prayers, crying *Allah Akbar*, than Abu Lulu rushed upon him, and with a sharp dagger inflicted six wounds in different parts of his body. Then he ran wildly about, killing some and wounding others, and at last stabbed himself to death. Omar, who had fallen to the ground, was borne into his house adjoining the court, but was sufficiently composed to desire that Abd al Rahman should proceed with the service. When it was ended, he summoned him to his bedside, and signified his intention of nominating him to the Caliphate. "Is it obligatory upon me?" inquired Abd al Rahman. "Nay, by the Lord!" said Omar, "thou art free." "That being so," he replied, "I never will accept the burden."

SIR WILLIAM MUIR.

## 2. Translate into English :—

Les pieds nus dans ses sabots, faisant claquer son fouet derrière ses bêtes, il les chassait dès l'aube vers les friches, à la lisière d'un bois qui domine la vallée. Là, vautre dans l'herbe, tandis que les vaches pâturaient, il lisait un vieux Almanach liégeois trouvé à la maison dans un coin de lâtre, et dont il connaissait quasi toutes les pages par cœur. Lorsqu'il était las de lecture, il se couchait sur le dos et regardait les nuages courir dans le ciel ou les papillons voltiger sur les genêts. Ayant l'intelligence curieuse et éveillée, il observait les oiseaux, les arbres, les insectes, comparait les formes diverses des choses et pénétrait petit à petit dans le domaine enchanté de la nature.

Gourmand autant que curieux, il était peu de plantes dont il n'eût expérimenté à ses dépens les vertus aromatiques ou amères ; il connaissait tout ce qu'il y a de bon à manger dans les champs et dans les bois ; depuis les tubercules noirs de la gesse (*vetch*), jusqu'au baies brunes qui pendent en bouquets dans les feuilles rougies des alisiers (*beam-tree*). De l'été à l'automne, il vivait avec délice de cette vie végétale, communiant sous toutes les espèces avec la nature, emplissant ses narines d'odeurs sylvestres et son estomac de fruits sauvages. Fraises des bois, merises juteuses, noisettes blanches comme lait, prunelles bleues par les premières gelées, tout servait à assaisonner son croûton de pain de ménage et à suppléer à la nourriture insuffisante qu'il trouvait au logis. Gorgé de fruits acides, grisé de vertes odeurs, sentant bon l'herbe et la terre, il rentrait au gîte à la brune et s'endormait en rêvant d'arbres et d'oiseaux.—ANDRÉ THEURIET.

3. Distinguish between (a) *avoir affaire à*, *avoir affaire avec*, *avoir affaire de* ; (b) *disposer*, *disposer à*, *disposer de* ; (c) *servir*, *servir de*, *se servir de* ; (d) *traiter en ennemi*, *traiter d'ennemi*, *traiter avec l'ennemi*.

4. What etymological anomalies are there in the following italicised words : *courir*, *vire*, *le lendemain*, *je crois*, *nous fûmes*, *grandement*, *ma mie*, *leurs frères* ?

5. Translate the following sentences, and comment on the words and expressions italicised :—

(a) In a quarter of the *city* which was inhabited *only* by *mechanics* and Jews, the marriage of an innkeeper and a washer-woman *produced* the future *deliverer* of Rome. From *such* parents Nicholas Rienzi could inherit neither *dignity* nor fortune, *and the gift* of a liberal education, which they painfully bestowed, was the cause of his glory and untimely end.

(b) Rienzi's *aspiring hopes* were chilled by *disgrace* and poverty.



(c) *After an oath of secrecy and aid*, Rienzi represented to the conspirators the importance and facility of their enterprise.

(d) Never, perhaps, has the energy and effect of a single mind been more remarkably *felt* than in the sudden, though *transient*, reformation of Rome by the tribune Rienzi. *Patient to hear, swift to redress, incorable to punish*, his tribunal was always accessible to the poor and stranger.

6. Explain the differences of meaning in the following French-English Homonyms, and illustrate these differences by appropriate sentences:—

(a) *tender*, (b) *spirit*, (c) *severe*, (d) *parent*, (e) *office*, (f) *modesty*, (g) *idiom*, (h) *expose*, (i) *confidence*, (j) *commissioner*, (k) *character*, (l) *audience*, (m) *ancient*.

#### ESSAY.

SATURDAY, 6th April 1901.—2 to 3 P.M.

Write an Essay in French on *one* of the following subjects:—

1. The literary characteristics of Victor Hugo.
2. The influence of Paris on French civilisation.

#### GERMAN.

##### FIRST PAPER.

MONDAY, 8th April 1901.—9 to 11 A.M.

1. Translate into idiomatic German:—

(a) When any accident happens, call to mind those who have formerly been under the same circumstances, how full of surprise, complaint, and trouble they were about the matter. And where are they now? They are gone, their murmuring could not make them immortal. To what purpose should you imitate

their behaviour? Cannot you leave these foreign emotions to those who cause them, and those who are moved by them? Your business is only to consider how you may give a turn of advantage to the emergency. Now you can make good use of them, and they will supply excellent material, if you will but take care, and do nothing but what is warrantable. Always remembering, that whether you use it ill or well, the thing wherewith action is concerned, is in both cases indifferent.

(b) When one stands in the middle of a broad flat country, or looks out upon the wide sea, it seems as if this world, whereon we live and move, were a great plain, to the edge of which one would come if one went far enough onward. This is the first notion we have as children. It was also the firm belief of mankind in early times. The sun and moon were once thought to rise and set only for the use of the human race; and the sky, with all its stars, was looked upon as a great crystal dome covering and resting upon the earth. But we can easily prove to ourselves that the eye is deceived about the flatness of the earth, and that what seems quite level is in reality curved. In a wide level country, one cannot see trees and houses farther away than some four or five miles. If we climb to the top of a church-tower, we find many objects come into sight which could not be seen from the ground. And if there happens to be a range of hills in the neighbourhood, we can note from their tops a still larger number of points that before were hidden. The higher one climbs above ground, therefore, the farther one can see.

2. Give the idiomatic German of *fifteen* of the following:—do not take it amiss—he made off—in the very act—to make short work—<sup>5</sup> much is at stake—to take to task—we have done with one another—to make amends for—to deal a blow—<sup>10</sup> to arrogate to oneself—to pay one's respects—in black and white—to come to nought—the laugh is always against the loser—

<sup>15</sup> to play the same game—from time immemorial—an honest man is as good as his word—sound as a bell—to fix one's eye upon—<sup>20</sup> things go on merrily.

3. Translate into Modern German:—

(a) Sit got ein rechter rihter heizet an den burchen,  
daz er solt ûz sîner milte des gervochen,  
daz er die gar getriuwen ûz den valsehen hieze suochen!  
Joch meine ich hie; si werdent dort vil gar gesundert.  
doch sehe ich an ir eteslichen gerne ein schanden mâl.  
der sich mir windet ûz der hant reht als ein âl,  
owê daz got niht zorneclichen sêre an deme wundert!  
Swer sant mir var von hûs, der var ouch mit mir hein.  
des mannes muot sol veste wesen als ein stein,  
ûf triuwe sleht und eben als ein vil wol gemachter zein.

(b) Ich fragt ein Doctor künstenreich,  
Wem des Menschen Herz wer geleich.  
Er antwort mir fein senft und kühl:  
Das Herz ist ganz gleich einer Mül,  
Das an al Du stets malen tut,  
Was man aufschütt, böß oder gut,  
Dem selbigen es Tag und Nacht  
Gar embsiglich nach dacht und tracht,  
Niest und beutelt es hin und her,  
So spiksfündig und wunderper,  
Und tut sich mit stetem Nachdenken  
Selb trösten und auch oft bekrenken,  
Sich etwan hoch in Freuden übet,  
Etwan sich engstlich hart betrübet.  
Jetzt ist es ring, dan balt schwermütig,  
Balt ist es zornig, darnach gütig,  
Jetzt ist es kün, balt wirt es zag.  
Die Endrung gschicht al Stunt und Tag,  
Darnach man ihm aufschütt zu malen  
Gut Keren oder unnütz Schalen.

4. Define the attitude of Walther von der Vogelweide and of Hans Sachs towards religion, and towards the Church of Rome in particular.

5. Give the meaning and etymology of any *ten* of the following:—überhaupt—Hoffahrt—Bischen—heuer—Garous—Genie—Junfer—weiland—Schultheiß—gesliffentlich—Statthalter—deutscher Michel.

## SECOND PAPER.

MONDAY, 8th April 1901.—11.30 A.M. to 1.30 P.M.

1. Translate into idiomatic English:—

(a) In einem Sonntag, es war die heiterste Frühe, stiegen wir in Sorrento in die Barke und ließen uns nach Capri hinübereudern. Das Meer war so still wie der Himmel und alles in weiter Ferne in träumerischem Dufte verloren; aber Capri stand vor uns groß und ernst, klippenstarr und felszackengepanzert, in der melancholischen Wildheit seiner Berge und in der Schroffheit der steilen Kalkwände von roter Farbe, fürchterlich und lieblich zu gleicher Zeit. Auf den Höhen braune Kastele, nun zerfallen; verlassene Strandschauzen mit verrosteten Kanonen, die schon der Ginsterstrauch mit gelben Blumenästen überdeckt; Klippen wild und schartig, in den Äther hinaufgreifend und von Seefalken überflattert, vogelheimisch und sonngewohnt, wie Äschylus sagt; Höhlen tief unten, dämmervoll und märchenhaft; aber oben auf dem gebogenen Rücken des Eilandes ein heiteres Städtchen mit weißen gewölbten Häusern, mit hohen Mauern und einer Kirchenkuppel; unten an der schmalen Marina der Hafen der Fischer und viele aufgereichte Barken.

(b) Unser Herrgott selbst sollte richtend oben stehen; die blutigen Würgengel der Revolution schmetterten in die Posaunen; schwarzes Nachgewölk, von Blitzen fahl durchleuchtet, schattete zur Linken des Richters, wo die schlechten Könige in den Abgrund stürzten, statt

des Kopfes eine hohle Krone auf dem Rumpfe, von einem züngelnden  
Flammenmantel statt des Purpurs umlodert, wo die Diplomaten  
von Schlangen umringelt wurden, die ewig rückschreitenden Pfaffen  
von großen Krebsen zernagt, die Edelleute von ihren Wappen-  
thieren, von acht heraldischen Greifen, Löwen und Adlern zer-  
fleischt, ober unten im Abgrunde an vielästige Stammbäume als  
ihre eigenen Schildhalter aufgehängt, wo die blutsaugenden Reichen  
und Wucherer mit schweren Geldsäcken am Halse in bodenlosen  
Schlamm tiefer und tiefer versanken und vergebens den armen  
Bazarus, den gemeinen Arbeiter, der sich drüben aus seinen Lumpen  
erhob, ansahen, daß er ihnen das Centnergewicht ihres Geldsackes  
abnehmen möge.

(c)

Wie war mir, Königin!

Als mir der Säulen Pracht und Siegesbogen  
Entgegenstieg, des Kolosseums Herrlichkeit  
Den Staunenden umfing, ein hoher Bildnergeist  
In seine heitre Wunderwelt mich schloß!  
Ich hatte nie der Künste Macht gefühlt:  
Es haßt die Kirche, die mich auferzog,  
Der Sinne Reiz, kein Abbild duldet sie,  
Allein das körperlose Wort verehrend.  
Wie wurde mir, als ich ins Innre nun  
Der Kirchen trat, und die Musik der Himmel  
Herunterstieg, und der Gestalten Fülle  
Verschwenderisch aus Wand und Decke quoll,  
Das Herrlichste und Höchste, gegenwärtig,  
Vor den entzückten Sinnen sich bewegte,  
Als ich sie selbst nun sah, die Göttlichen,  
Den Gruß des Engels, die Geburt des Herrn,  
Die heilige Mutter, die herabgestiegne  
Dreifaltigkeit, die leuchtende Verkärnung —  
Als ich den Papst drauf sah in seiner Pracht  
Das Hochamt halten und die Völker segnen.

O, was ist Goldes, was Juwelen-Schein,  
 Womit der Erde Könige sich schmücken!  
 Nur er ist mit dem Göttlichen umgeben,  
 Ein wahrhaft Reich der Himmel ist sein Haus:  
 Denn nicht von dieser Welt sind diese Formen.

- (d) Drei Zigeuner fand ich einmal liegen an einer Weide,  
 Als mein Fuhrwerk mit müder Qual schlich durch sandige Heide.  
 Hielt der eine für sich allein in den Händen die Fiedel,  
 Spielte, umglüht vom Abendschein, sich ein feuriges Liedel.  
 Hielt der zweite die Pfeif' im Mund, blickte nach seinem Rauche,  
 Froh, als ob er vom Erdenrund nichts zum Glücke mehr  
 brauche.

Und der dritte behaglich schlief, und sein Cymbal am Baum  
 hing,  
 Über die Saiten der Windhauch lief, über sein Herz ein Traum  
 gieng.

An den Kleidern trugen die drei Löcher und bunte Flecken,  
 Aber sie boten trotzig frei Spott den Erdengeschicken.

Dreifach haben sie mir gezeigt, wenn das Leben uns nachtet,  
 Wie man's verrauht, verschläft, vergeigt und es dreimal  
 verachtet.

Nach den Zigeunern lang noch schau'n mußt' ich im Weiter-  
 fahren,

Nach den Gesichtern dunkelbraun, den schwarzlockigen Haaren.

2. Give the idiomatic English of *fifteen* of the following:—

Er soll es sich hinters Ohr schreiben—man muß ihm viel nachsehen  
 —er läßt nichts gelten—eine ausgemachte Sache—<sup>5</sup> beileibe nicht—  
 ohne sein Zuthun—er konnte daraus nicht klug werden—er hält  
 große Stücke auf ihn—frisch von der Leber weg—<sup>10</sup> es will bei ihm  
 nicht versagen—nun und nimmer—fort und fort—vogelfrei—er  
 hat ihm den Garauß gemacht—<sup>15</sup> er kam mir in die Quere—er läßt



es sich jauer werden—es bleibt beim Alten—das ficht mich nicht an—er wird es übel vermerken—<sup>20</sup> es geht mir ein Licht auf.

3. Answer *one* of the following questions:—

(a) Show to what extent Goethe and Schiller have come under the influence of the “romantic” and the “classical” tendencies of their age.

(b) How do you account for the want of unity in Goethe’s *Faust*? Show how this work is connected with experiences of Goethe’s own life, the tendencies of the period of *Sturm und Drang*, and with the great movements of the Renaissance and the Reformation.

(c) What do you know of the history of the German *Volkslied* and of its influence on German literature? Mention some of its characteristic features, and illustrate your remarks, if possible, by a few quotations.

### THIRD PAPER.

MONDAY, 8th April 1901.—2 to 3 P.M.

Write a German Essay on *one* of the following subjects:—

(a) Die Bedeutung der Volksspiele im englischen Leben.

(b) Welche Geistes- und welche Charaktereigenschaften sind für den Lehrerberuf vorzugsweise erforderlich?

(c) Schiller als Balladendichter.

### SANSKRIT.

#### FIRST PAPER.

THURSDAY, 21st March 1901.—9 to 11 A.M.

I. Translate into English:—

1. *Pañcatantra* (Bühler, 1891) II., p. 33, ll. 3-25.
2. Do., verses 21, 26, 49, 68, 79, 158.
3. *Nalopākhyāna*, VII., 7-15.
4. Do., IX., 12-16.

II. 1. Nom., dat. singular; nom., instrum. plural of *sakhī*, *ātman* (m.), *loman* (n.), *śvan*, *pathin*, *karin* (m.), *garīyas*.

2. Acc., instr., gen., loc. singular of *mālā*, *pālī*, *nṛipati*, *sakhī*, *bhū*, *tad* (m.f.), *idam* (m.f.).

3. First and third singular, and third plural *imperfect* *parasmaip.*; and second person singular *imperative* *parasmaipada* of *vyadh* (4th), *bhid* (7th), *jñā* (9th), *bhī* (3rd), *kṛi* (8th); and the same forms *ātmanepada* of *yu* (9th), *ci* (5th).

4. First and third singular *optative* *parasmaipada* and *ātmanepada* of *gam* (1st), *muc* (6th), *vid* (2nd), *bhid* (7th).

5. Third singular and plural perfect *parasmaipada* of *yuḥ*, *sthā*, *gam*, *pat*, *bhū*, *ish*, *vah*, *cur*; and the same forms of aorist *parasmaipada* of *dhā*, *gam*, *kship*, *nī*.

6. Infinitive and past participle passive of *kṛi*, *gam*, *sthā*, *bhid*, *yuḥ*, *dhā*, *vac*, *cur* (10th).

#### SECOND PAPER.

THURSDAY, 21st March 1901.—11.30 A.M. to 1.30 P.M.

#### I. Translate into Sanskrit:—

In the city of Kāñcī, a thief, named Dhūrtaka, was caught in the act of breaking into a rich merchant's house, and condemned to death. When he arrived at the place of execution, he said to the king's officers, "Before I die, I should like to impart an important secret to your master." Having been taken to the royal council, he was asked by the king what his secret was. "Sir," he replied, "I know the art of growing gold flowers from seed." The king, whose cupidity was excited, granted him a reprieve of three months. The man, having mixed gold dust with other substances, and made small seed-like pills, dug a piece of ground in a secluded place. This being done, he said to the king, "Sir, everything is ready; the seeds must now be sown (*vap*) by some one who has never

stolen anything: let Your Majesty condescend to act as sower." The king, hesitating, replied, "When I was a boy, I sometimes took money from my father's cash-box to give to my play-fellows: one of my ministers shall sow the seeds." But neither the ministers, nor the judge, nor even the chaplain felt quite free from guilt. "If, then, we are all of us thieves," said the sly rogue, "why am I alone to be put to death?" Then the king laughed and said, "I see you are a merry fellow. you shall always remain near me, and make me laugh whenever I am in low spirits."

II. 1. State what you know of the *Indian Drama* and the *Kūryas*.

2. What works do you assign to:—*Vālmīki*, *Bharabhūti*, *Vāṣṭavalkya*, *Śūdraka*.

3. Describe briefly each of the following works, giving the name of the author when known:—*Vikramorvaśi*, *Gītāgovinda*, *Mahābhāṣya*, *Śatapatha-brāhmaṇa*, *Amarakośha*, *Kōdambari*, *Dasakumāracarita*, *Ratnāvali*, *Raghuramāsa*, *Sāmaveda*.

## CELTIC.

### FIRST PAPER—OLD GAELIC.

WEDNESDAY, 27th March 1901.—9 to 11 o'clock.

#### 1. Translate:—

Luid Cuchulaind lee iarom is tir ocus bert a charpat les, co rancatár in n-insi. Feraib Labraid fáelti friú, ocus fersi in bantocht uli, ocus ferais Fand dano fáelti sinredaig fri Coincualind. "Cid dogentar sund hi fecht sa?" ol Cuchulaind. "Ninsa" or Labraid, "is ed dogenam, regmai, co rolam cor imón slúag." Tiagait ass iarom co rancatar tor na slúag ocus co rolsat súil tairsiu, ocus bá dírim leó in slúag. "Éirg ass hi fecht sa" ol Cuchulaind fri Labraid. Luid Labraid ass iarom

ocus anais Cuchulaind ocon t-slóg. Fanóerat in da fiach druidechta. Dogensat in t-slúaig. “Is dóig” ol in slúag “in ríastartha a hErind, is ed terchanait ind fiaich.”

2. How does Windisch parse *ferail* in the foregoing? State any other view known to you regarding this and other similar forms, and discuss briefly.

Analyse *fersi*, *dogentar*, *fanóerat* in the above passage.

3. Translate:—

“Cest trá” ar Emer “cid fód ruair lat-su a Chúculaind mo dímiad-sa fiad andrib ilib in chuichid ocus fiad andrib ilib na hErind ocus fiad áes enig ar chena, ar is fót clith tanae-sa ocus fo ollbrig do tharisen, ar cia not bagea uall ollimresan, bés ní pád rith lat-su mo lecuin-sa a gillai, cia no triallta.”

Give the cognates of any *six* words in this passage. Give grounds for your rendering of *rith* or of your view regarding it.

4. Translate:—

Mor fer ro bóí com iarraid eter chlitar is diamair, no co dernad rúi mo dál, dáig is misi rop irán; Mairg dobeir seire do duni menestarda dia airi, is ferr do neoch a chor ass mene chartar mar charas.

Give some grounds for your rendering of *irán*; analyse *menestarda*, *chartar*, *charas*.

5. Decline fully in Old Irish:—

in chathir “the town”; in t-athir “the father”; ind adaig “the night”; am muir n- “the sea”, classifying these nouns under their stems.

Indicate what progress has been made since Zeuss in the investigation of the Old Irish declensional system.

6. Express in English:—

Acus co n-acai lucht inna innsea a fail dib i n-etail De a corp. Robatar a medon an glenna agus eat oc cui. “Ole, a Dé!” ol an anim. “In duineba thainic diar n-eis? ol atbeatar an tsluaig si uili diar n-eis antan forragabsam.” “Ní ed” ol an

t-angel “acht ceoh oen fail i n-étail Dé a mbethaid dit éis, iss ed indso foracat a n-anmain, agus as airhenn ard atá, maní dernat aithrige.” “Cest: in eber-sa” ol in fer fri ceoh n-anmain atéiu sund? “Nato,” ol an t-angel arnabat derchaintech de. Apair friu immorro denat aithrige, ar nach aon dogena aithrige agus forcennfa inti ní bia isind lue sa, acht biaid il-lue dídanta ond ule sa, agus nambera a aithrige secha. Agus dano anti bias i firinde, as betha foracai cein bis i curp agus as betha’na mbia mad feidil i firinne. Apair friu iarum, ol ant aingel, “anti fuil i firinne bád feidil innti, ar ní ba sir a n-imráiti doib connati éc. Inti dano fil i n-etail Dé, dénad aithrige, ol arfoem Dia ind aithrige mad o cride etail dognether, agus cungenaid trocaire De fris.”

7. Write brief notes regarding—

The Book of Armagh, The Würzburg Old Gaelic Glosses, The Milan Glosses.

8. Indicate the position of Cuchulainn in Old Gaelic Story. What features of interest would you trace in *Scrílige Conculaind*?

# SECOND PAPER—MODERN GAELIC.

WEDNESDAY, 27th March 1901.—11.30 to 1.30 o'clock.

- I. Gur sealgair sithne 'n garbhlach thu  
 Nan agh bu mheanmaich' leum,  
 Is cuilbheir caol neo-dhearmadach  
 'N ad gheala-ghlaic gun chearb gleus;  
 Is t' fheara lùthmhor astarach  
 Gun airsneal as do dhéigh,  
 'S bu cheòl gu mìn do chaismeachd  
 'N uair dh' fhaclaicheadh do bheul.  
 Gur tearc anns an aois mheirgidh so  
 Fear meanmann an laoiach òig,

A bhuin air ais gu m' chuimhne-sa,  
 'N am inntinn an aois òir;  
 Bhiodh armadh nan sonn gasda sin  
 Mu 'm pearsachan gun leòn,  
 'S a'chonnbhail fhallan threunanta  
 Le cleachdadh beusach còir.

(1) Translate the passage to English; (2) Analyse the forms *gur*, *as*; (3) Point to any classical allusions in the passage; (4) Name the loan words in the passage; (5) Give three examples from the passage of words of rare occurrence; (6) Parse *gleus* and *fheara*, and account for the departure from the correct form in both cases.

II. William Ross was born in Broadford, parish of Strath, Isle of Skye, in 1762, and died in 1790. He was grandson, by the mother's side, to another celebrated bard, known as the blind piper. At school he studied the classical languages, and in his songs the polish of the man of education may be traced, as his style is refined and cultivated, though remarkably natural and easy. The reader may perceive, without much difficulty, that he exerted his utmost endeavours to write his native language with purity and elegance. In his poetry we meet with something like the gay amorous strain of Moore, though not his richness of fancy; the spirit of the classical poets may be readily traced in his verses.

(1) Translate this passage into Scottish or Irish Gaelic; (2) Comment upon the passage, quoting from Ross's songs in support of your remarks.

III. Ma bhios t' òige gun riaghladh,  
 Is t' ana-mianna gun taod riu,  
 Gu'm fàs iad cho fiadhaich  
 'S nach srian thu ri t' aois iad:  
 Am meangan nach sniomh thu,  
 Cha spion thu 'na chraoibh e;



Mar shineas e 'gheugan,  
Bidh a fhreumhan a' sgaoileadh.

(1) Translate the passage to English; (2) Name *three* well-known writers of Gaelic sacred poetry, and write a page comparing any *one* of these with Dugald Buchanan.

IV. Write a full note, with examples, on the use of the article in Gaelic as compared with English and Greek.

V. Name the negative prefixes in Gaelic, adding a note on their philological relationship, and examples to show the specific meaning of each.

VI. Translate to English any *one* of the following passages :—

CRIDH-MÒR.

(a) Co thig cho samhach o'n aonach,  
Mar neul o'n iar, 's a thaobh 's a' ghréin?  
Co d' am bheil an guth cho caoin,  
Cho labharra ri gaoith 's a' bheinn,  
'S e taitneach mar chaol-chruit Charuill?  
'S e mo sheòd, 'na shoills' a th' ann,  
Sar-ghaisgeach nan lann fo bhròn.  
'S dorch a tuar do mhala thall;  
Am bheil Fionnghal an triath gun deò?

(b) Biod a fiadhaise sin ar an nìd léagtar ag Galiensis, .i. go raibe aon-mac duine uasail aig a raibe oigreach mór 'n-a còmhair, do gab cuing cràbaid, 7 do treig toice an tsaogail ar gràd na bocta; 7 an traì do èuala a atair sin, do gab fearg mór é, 7 do èuaid d'fios a mic, d'a guide im tuideach as an òrd boet 'n-a raibe.

VII. (a) Write a paper, not exceeding a page, on the bearing of the Proper Names in Macpherson's *Ossian* upon the authenticity of these texts, or (b) turn the passage VI (b) into Scottish Gaelic.

## II.—MENTAL PHILOSOPHY.

## LOGIC.

MONDAY, 1st April 1901.—9 to 11 A.M.

1. Give the contradictory and contrapositive of the following propositions :—

(a) Only the wise know their own limits.

(b) There are actions which are just and yet not expedient.

(c) What is not useful is not desirable.

2. Explain the meaning and use of Reduction.

3. State and compare the classifications of Fallacies given by Aristotle, Bacon, and Mill respectively.

Define and exemplify the fallacies of (a) Composition, (b) *Ignoratio Elenchi*, (c) *post hoc ergo propter hoc*.

4. Discuss the question whether Induction can rightly be described as an argument from particulars only.

5. Consider the character and ultimate grounds of the Method of Residues.

6. Discuss the psychological significance of Attention.

7. "Intellection consists in a double process of differentiation and integration, or analysis and synthesis." Explain.

8. Give a psychological account of the perception of time-relations.

TUESDAY, 2nd April 1901.—3 to 5 P.M.

1. Discuss the possibility of explaining the Association of Ideas in terms of a single law.

2. Discuss the relation of mental imagery to conceptual thinking.

3. In what does the importance of Democritus consist? Give a short account of his system, and compare it with that of Anaxagoras.

4. Plato says the Idea is the real, Aristotle says that the individual is the real. How far do they agree, and how far do they differ?

5. Point out those features of the Cartesian philosophy which conditioned the further development of modern philosophy.

6. State carefully what Locke means by complex ideas of substances, and give his explanation of their origin. What does Locke mean by Substance, and what was Berkeley's criticism of his conception of it?

7. Explain what Berkeley means by Spirit, and what it is that distinguishes Spirit. Consider Hume's criticism of the notion of Spirit.

8. State carefully Hume's account of *necessary connection*, and give in detail his criticism of other accounts of it

## MORAL PHILOSOPHY.

### FIRST PAPER.

THURSDAY, 4th April 1901.—11.30 A.M. to 1.30 P.M.

1. Consider how far the fact of what men do desire affects the question what they ought to desire.

2. Give a careful account of Butler's doctrine of Conscience. Examine its historical connection with the theories of Shaftesbury and Hutcheson, and compare it critically with Mill's account of Conscience.

3. Give a detailed account of the development of the idea of Pleasure as the moral ideal in Bentham, Mill, and Spencer.

4. State precisely the significance, and discuss the truth, of Spencer's distinction between Absolute and Relative Ethics.

5. Explain the different theories of the aim of Punishment, and discuss their value.

6. Explain, and examine critically, the statement that the problem of Freedom is the problem of Personality.

## SECOND PAPER.

THURSDAY, 4th April 1901.—3 to 5 P.M.

1. Give an exact account of Plato's scheme of the virtues. Discuss its relation (a) to his Psychology, (b) to his political theory, (c) to the Socratic doctrine of the Unity of Virtue.

2. What is the significance of Aristotle's conception of Virtue as a Mean? What further characterisation of Virtue do we find in Aristotle?

3. How far are we warranted in characterising (a) the Epicureans, (b) the Stoics, as moral Individualists?

4. Explain the significance of the word "Nature," as used by Hobbes. What does Hobbes mean by "state of nature," "law of nature," and "natural right"?

5. Explain and examine the account of Justice given in Mill's *Utilitarianism*.

6. Discuss Spencer's view of the relation of Egoism and Altruism.

## POLITICAL ECONOMY.

## FIRST PAPER.

THURSDAY, 21st March 1901.—5 to 7 o'clock.

(SEVEN Questions only to be answered.)

1. "The laws of the production of Wealth partake of the character of physical laws; but the distribution of Wealth is a matter of human institution solely." Discuss this contrast.

2. State and examine Mill's definition of Wealth. Would you include in the Wealth of a Nation banknotes and the skill of the people?

3. Give a critical account of Mill's views on property in land.

4. Define Economic Rent. State and classify the various forms of Quassi-Rent; and show the importance of the element of time in reference to the determination of what is, or what is not Economic Rent.

5. Explain carefully:—Consumption; Capital; Consumer's Rent; Real Wages; Disutility of Labour.

6. What is meant by Profits? How do they differ from Interest? Discuss Mill's analysis of Profits. What does he mean by saying "The rate of Profit depends on the cost of Labour"?

7. Examine Marshall's account of the Law of Normal Wages of unskilled Labour, and compare it with Mill's views.

8. What precisely is meant by the Law of Diminishing Returns? How is it counteracted in the course of industrial progress?

9. What causes tend to make (*a*) Profits, and (*b*) Wages equal in different employments, and what are those which tend to make them unequal?

10. On what grounds do Socialists attack the present system of Individualism?

SECOND PAPER.

FRIDAY, 22nd March 1901.—5 to 7 o'clock.

SEVEN Questions only to be answered.

1. Show the importance of long and short periods respectively in relation to Normal Value.

2. State the general principle governing cases of joint supply and demand; how might a rise in the value of wool affect the price of hides?

3. Explain the terms Appreciation and Depreciation as applied to the various relations of value between Gold, Silver, and Commodities.

4. Examine critically the various interpretations of the maxim that Taxation should be equal. In what cases, if any is it desirable to depart from equality in levying taxes? Discuss the incidence of a Tax on the Rent of Land.

5. State "Gresham's Law;" and explain the apparent paradox involved in it.

6. What are the real advantages of foreign trade? Examine the ideas involved in a "favourable balance of trade."

7. What principles should govern a Bank in the management of its Reserves? Illustrate by reference to the Bank of England.

8. Why, on Adam Smith's reasoning, should the monopoly of the Colonial Trade lower the price of Land in England?

9. Discuss the policy of the Navigation Acts.

10. Why should the Issue of Bank Notes be regulated by Government?

11. What does Adam Smith understand by the "obvious and simple system of natural liberty"? Notice some of the exceptions to the principle in Demand, Production, and Distribution.

## THEORY, HISTORY, AND ART OF EDUCATION.

FOR M.A. AND SCHOOLMASTER'S DIPLOMA.

FIRST PAPER.

FRIDAY, 29th March 1901.—9 to 11 A.M.

1. Justify the derivation of educational method from a philosophy of Intelligence.

2. Show how the investigation of the content of an Act of Will reveals to us the Educative Process in general.

3. Classify the Materials of Education by a reasoned relation to the Educative Process.



4. What is the "value" of Nature-Knowledge in the Instruction-Plan, and how is it to be secured? Emphasise, by examples, the determining power of locality in the forming of a scheme.
5. What do you expect the Object-Lesson to accomplish in the Upper Primary Stage?
6. Illustrate, by reference to teaching of Mathematics, the difference between Discipline and Training. Suggest methods to secure the due attainment of both.
7. Take three of the more important Principles of Method and relate them to their psychological bases.
8. Contrast the Real and the Formal in Ethical Education.

SECOND PAPER.

FRIDAY, 29th March 1901.—11.30 to 1.30.

1. Appreciate, as fully as you can, the Renaissance influence upon the school.
2. Connect the realism and encyclopaedism of Comenius with the circumstances of his time, and consider the value of the latter as a feature of his Educational philosophy.
3. Give some account of the aims, general and immediate, of Education, as interpreted by Comenius.
4. Show how Locke's *Conduct of the Understanding* modifies the doctrine of the *Thoughts*, as regards intellectual training.
5. Discuss Locke's view as to "the great principle and foundation of all virtue." In accordance with this, how does he propose to deal with "craving" in children?
6. Give the substance of Locke's teaching in the *Conduct*, under the sections, *Examine*, *Universality*, *Similes*, *Indifferency*.
7. What is the relation of the teaching of Literature to the aim of Education as Ethical?
8. What should be, according to Rousseau, the characteristics and duties of a teacher?

9. Assign to Pestalozzi what seems to you his place in the bettering of the work of Education.

THIRD PAPER—*Schoolmaster's Diploma only.*

SATURDAY, 30th March 1901.—9 to 11 A.M.

1. Give an outline of Milton's scheme of Education, under the heads of Studies and Exercise.

2. Give, with a running commentary, the substance of Quintilian's teaching upon (a) the advantages of public education, (b) the qualifications of a teacher, (c) corporal punishment, (d) reading, (e) child-study.

3. What was the place of Literature in the Instruction-Plan of the Romans? Express Quintilian's opinion thereon.

4. From Quintilian's ideal of the Orator, explicate his conception of the End of Education.

5. Show how the characteristics of Hellenic Education were determined by their conception of manhood. Contrast the various realisations.

6. What features of the system account for the high place occupied by the Schools of the Jesuits? Criticise their use of Emulation.

7. Give hints for the Art of Questioning.

8. Sketch the method of a lesson on—

Ocean Currents ;

*Or,*

The Office of Premier ;

*Or,*

“The quality of mercy is not strained,” etc.

Thesis on either (a) Specialisation in Secondary Schools, or (b) History in the School, or (c) Technical Schools, from the Educator's stand-point.

(Theses to be posted to PROFESSOR LAURIE on Tuesday night.)

## PHILOSOPHY OF LAW.

*See Papers under Faculty of Law.*

## III.—SCIENCE.

### PURE MATHEMATICS.

WEDNESDAY, 3rd April 1901.—3 P.M. to 5 P.M.

1. Prove that the diagonals of a parallelogram bisect each other; state and prove a converse.

Describe a parallelogram whose vertices shall lie on the sides of a given triangle and whose diagonals shall intersect in a given point.

2. The angles between a tangent to a circle and any chord through its point of contact are equal to the angles in the alternate segments cut off by the chord.

The bisector of the angle  $BAC$  meets  $BC$  in  $X$ . Prove that the circle which passes through  $A$  and touches  $BC$  in  $X$  has the same tangent at  $A$  as the circle  $ABC$ .

3. Given a rectilinear polygon of  $n$  sides to construct a polygon of  $n-1$  sides having the same area.

Given the area of a triangle and the middle points of two sides, find the locus of the middle point of the third side.

4. If the straight line  $XY$  is parallel to the base  $BC$  of the triangle  $ABC$ , and cuts the sides in  $X$  and  $Y$ , prove that  $AB : BX = AC : CY$ .

$ABC$  and  $DEF$  are concentric circles. To draw a straight line  $BEFC$  so that  $BC : EF$  is a given ratio.

5. Prove that the cross ratio of the four points in which any transversal meets a given pencil of four straight lines is constant.

Given two points  $A$  and  $B$  in a straight line, to find two

points  $P, Q$  in the line which shall be harmonically conjugate with respect to  $A$  and  $B$ , and such that  $PQ$  is a given length.

*Or, as an alternative,*

Prove that the ratio of the lengths of the two tangents drawn from any point to a central conic section is equal to the ratio of the lengths of the parallel semi-diameters.

If a conic touch the sides of a triangle  $ABC$  in the points  $D, E, F$ , prove that  $AD, BE, CF$ , are concurrent.

6. Prove that the volume of a tetrahedron is equal to the product of one-third of the area of its base and the vertical height.

Find an expression for the radius of the sphere inscribed in a given tetrahedron.

7. Prove that the tangent at any point on a parabola makes equal angles with the focal distance of the point and the diameter.

Prove that the locus of the centres of all circles that touch a given circle and a given straight line is two parabolas.

8. Prove that the necessary and sufficient condition that  $x-a$  be a factor of  $x^4+px^3+qx^2+rx+s$  is that  $a^4+pa^3+qa^2+ra+s \equiv 0$ .

Factorise (i)  $a^4(b-c)+b^4(c-a)+c^4(a-b)$ ;

(ii)  $2x^3+7x^2+7x+5$ .

9. Prove the formula  $\cos(A-B) = \cos A \cos B + \sin A \sin B$ .

Shew that  $\cos^2 \theta - \cos \theta \cos(60^\circ + \theta) + \sin^2(30^\circ - \theta)$  is constant: also that  $\cos^3 2\theta + 3 \cos 2\theta \equiv 4(\cos^6 \theta - \sin^6 \theta)$ .

10. In any triangle, prove that

$$(i) \quad s = a \cos^2 \frac{B}{2} + b \cos^2 \frac{A}{2};$$

$$(ii) \quad \text{If } (b-c) \tan \theta = (b+c) \tan \frac{1}{2}A, \text{ then } a \cos \theta = (b-c) \cos \frac{A}{2}.$$

11.  $AB$  is a base line of given length  $a$  in a horizontal plane  $P$ ;  $Q$  is a point above  $P$ , but not vertically over the base line.

Point out what angles must be measured with a theodolite in order to determine the height of  $Q$  above  $P$ : and give logarithmic formulæ for working out the height.

$OCA$  is a diameter of a circle whose centre is  $C$ ;  $P$  and  $Q$  two points on the circle which subtend a right angle at  $C$ .  $OP$  and  $OQ$  meet the tangent at  $A$  in  $R$  and  $S$  on opposite sides of the diameter: if  $AR=x$ ,  $AS=y$ , prove that  $xy+d(x+y)-d^2=0$  where  $d$  is the diameter.

*Or, as an alternative,*

Prove that the quotient of two complex numbers is a complex number whose modulus is the quotient of the moduli of the dividend and divisor, and whose amplitude is (to a multiple of  $2\pi$ ) the excess of the amplitude of the dividend over the amplitude of the divisor.

By means of complex numbers, or otherwise, sum the series  $\sin \theta - \sin 2\theta + \sin 3\theta - \dots - \sin 2n\theta$ .

12. For the conic  $x^2/a^2 + y^2/b^2 = 1$ , find the equation to the locus of the middle points of a series of chords each of which is inclined at an angle  $\theta$  to the  $x$ -axis.

Find, for the conic  $y^2 = 4ax$ , the equation to the locus of the middle points of the chords which pass through the fixed point  $(x_1, y_1)$ .

*Or, as an alternative,*

Define *Inversion*; and prove that the inverse of a circle is either a circle or a straight line.

If  $A$  and  $B$  be the inverses of  $A'$  and  $B'$  respectively, prove that  $AB : A'B' = r^2 : OA' \cdot OB'$ , where  $r$  is the radius and  $O$  the centre of inversion.

THURSDAY, 4th April 1901.—9 to 11 A.M.

1. Explain what is meant by saying that an integral function of  $x, y, z, \dots$  is (i) *Symmetrical*, (ii) *Homogeneous*.

Write down a general form for a symmetrical homogeneous function of  $x, y, z, u, v$  of the 4th degree; and state how many terms there are of each type.

If  $x, y, z$  be all finite both ways, and  $y^2 + z^2 = 2ayz$ ,  $z^2 + x^2 = 2bcx$ ,  $x^2 + y^2 = 2cxy$ , prove that  $a^2 + b^2 + c^2 = 2abc + 1$ .

2. If  $P$  and  $Q$  be integral functions of  $x$  which are prime to each other, prove that any proper fractional function of  $x$  whose denominator is  $PQ$  can be decomposed into the sum of two proper fractions whose denominators are  $P$  and  $Q$ .

Decompose  $x^3/(4x^3 + 4x^2 - 7x + 2)$  into partial fractions.

Or, as an alternative,

Explain how to test whether an integral equation, say  $x^4 + px^3 + qx^2 + rx + s = 0$ , has equal roots; and how to find the equal roots when they exist.

If the circle  $x^2 + y^2 + ax + by = 0$  touch the parabola  $y^2 - lx = 0$  ( $l \neq 0$ ), prove that  $b = 0$ ; and explain what happens when  $b = 0$  and  $l = -a$ .

3. Explain the steps by which it is shewn that the sum of  $n$  terms of any series whose  $n$ th term is  $a + bn + cn^2$  ( $a, b, c$  being independent of  $n$ ) is of the form  $A + Bn + Cn^2 + Dn^3$ .

Sum the following series—

(i)  $1 \cdot 5 + 2 \cdot 10 + \dots + (n-1)(n^2 + 1)$ ;

(ii)  $(x + 1/x)^2 + (x^2 + 1/x^2)^2 + \dots + (x^n + 1/x^n)^2$ .

4. Assuming as proved for all positive commensurable indices that  $x^m x^n = x^{m+n}$ , and  $x^m y^m = (xy)^m$ , prove the like for any negative commensurable indices.

Solve the equation—

$$\left[ \frac{x + \sqrt{(x^2 - a^2)}}{\{x - \sqrt{(x^2 - a^2)}\}^2} + \frac{x - \sqrt{(x^2 - a^2)}}{\{x + \sqrt{(x^2 - a^2)}\}^2} \right]^{\frac{1}{2}} = \frac{8x^2}{a^{12}}.$$

5. Discuss the solution of the system  $ax + by + c = 0$ ,  $a'x + b'y + c' = 0$ ; (i) when  $ab' - a'b \neq 0$ ; (ii) when  $ab' - a'b = 0$ : and illustrate geometrically.



Solve the system—

$$3x - 2y + 5z = 5, \quad x - 3y + 3z = 1, \quad x + y + 1z = 1.$$

6. Find the condition that the roots of the quadratic  $ax^2 + bx + c = 0$  be :—(i) both real ; (ii) both zero ; (iii) both infinite.

Solve the following equations—

$$(i) \quad (x-a)(x+b+c) + (x-b)(x+c+a) + (x-c)(x+a+b) = 3;$$

$$(ii) \quad \sqrt{x^3 + x^2 + x + 1} + \sqrt{x^3 - x^2 - x + 1} = \sqrt{4x^3 + 4}.$$

7. Trace the graph of  $y = (4x^2 - 4x + 1)/(4x^2 + 4x - 1)$ ; and find the turning values of  $y$  and the corresponding values of  $x$ .

A rectangle is inscribed in a semicircle so that two vertices are on the diameter and two on the circle. Find by any method the maximum area of the rectangle.

Or, as an alternative,

$A'B'C'$  are the points of contact of the inscribed circle of the triangle  $ABC$  with the sides  $BC$ ,  $CA$ ,  $AB$  respectively; calculate the sides and angles of  $A'B'C'$  in terms of the sides and angles of  $ABC$ .

Discuss analytically the problem to construct a triangle when two sides and the radius of the inscribed circle are given. Is this problem in general soluble by elementary geometrical construction?

8. Prove that, if  $b_1, b_2, \dots, b_n$  be all positive, then  $(a_1 + a_2 + \dots + a_n)(b_1 + b_2 + \dots + b_n)$  is intermediate in value between the greatest and the least of  $a_1 b_1, a_2 b_2, \dots, a_n b_n$ .

Prove that  $(2^3 + 3^3 + \dots + (n+1)^3)/(1^3 + 2^3 + \dots + n^3)$  always lies between 8 and  $(1 + 1/n)^3$ .

9. Prove that the limit of  $(x^m - 1)/(x - 1)$  when  $x = 1$  is  $m$ ,  $m$  being any commensurable quantity positive or negative.

Prove that the limit of

$$\left\{ \frac{3}{4}(x^3 - 1) - \sqrt{(x^2 - 1)} \right\}^{\frac{1}{2}} \left\{ \frac{3}{4}(x^4 - 1) - \sqrt{(x^2 - 1)} \right\}$$

when  $x = 1$  is  $\frac{3}{4}(3/4)$ .

**10.** Prove the exponential theorem.

Find the limit of  $(1 - \cos x)^{1/x} (e^{2x} - 1 - 2x)$  when  $x=0$ .

*Or, as an alternative,*

Prove that any straight line reverts into a straight line.

Revert the theorem that the locus of the middle points of a series of chords of a circle ( $C$ ) which pass through a fixed point  $A$  is a circle passing through  $A$  and through the centre of the given circle. Take the centre of reversion at the centre of the circle  $C$ .

**11.** Find the equation to the two straight lines which pass through the point  $(x', y')$  and each make an angle  $a$  with the straight line  $y=mx+n$ . In particular, find the equation to the line ( $L$ ) through  $(x', y')$  perpendicular to  $y=mx+n$  ( $M$ ).

Find the equations to the lines which bisect the angles between ( $L$ ) and ( $M$ ).

**12.** Give Boscovich's construction for the tangents drawn from any point to a conic section, whose focus, directrix and eccentricity are given.

If the tangents to a conic at  $P$  and  $P'$  meet its directrix in  $R$  and  $R'$ , prove that  $PP'$  and  $RR'$  subtend equal angles at the focus.

*Or, as an alternative,*

State the nature of, and trace the loci:—

$$(i) \ xy - 3x = 1; \quad (ii) \ (x + 2y)^2 - (2x + y)^2 = 0;$$

$$(iii) \ (x + y - 7)(x - y - 3) = 21(x - 1)^2.$$

In particular, point out the relation of (iii) to the three lines  $x + y - 7 = 0$ ,  $x - y - 3 = 0$ ,  $x - 1 = 0$ .

**13.** Find the relation between  $m$  and  $n$  in order that  $y=mx+n$  may touch  $x^2 + y^2 + 2gx + 2fy + c = 0$ .

Also determine  $m$  and  $n$  so that  $y=mx+n$  may touch both  $x^2 + y^2 + 2gx + 2fy + c = 0$  and  $x^2 + y^2 - 2gx - 2fy + c = 0$ .

## NATURAL PHILOSOPHY.

## FIRST PAPER.

FRIDAY, 5th April 1901.—9 to 11 A.M.

*Not more than EIGHT questions to be attempted.*

1. Given the velocities of two points relative to a third, show how to find the velocity of the first relative to the second.

A steamer is moving eastwards, its smoke-trail runs from it in a direction inclined  $\alpha'$  to the west of north, and the direction of the wind is  $\beta'$  to the west of south. Compare the velocities of the steamer and the wind.

2. Explain the term *change of velocity* for a point which does not move in a straight line.

A point moves round a circle  $ABCD$ ,  $AC$  and  $BD$  being perpendicular diameters. The speeds at  $A$ ,  $B$ ,  $C$  are  $u$ ,  $2u$ ,  $3u$ . Find the changes of velocity (i) from  $A$  to  $B$ , (ii) from  $A$  to  $C$ .

3. Define acceleration. Find the relation among  $u$ ,  $f$ ,  $t$ , and  $s$  in the ordinary notation.

If an acceleration be 980 in c.g.s. units, what will it be if the units be a day and the circumference of the earth, which is forty million mètres.

4. Find the range on an inclined plane through the point of projection of an unresisted projectile.

Find the smallest value of the speed of projection which will give a range  $k$  on a plane, making an angle  $\alpha$  with the horizon.

5. Show how to find the velocities after direct impact of masses  $m$  and  $2m$  approaching each other with velocities  $4u$  and  $3u$ , the coefficient of restitution being  $e$ .

Find the loss of kinetic energy due to the collision.

6. A particle is acted upon by any number of forces in one plane; find the magnitude and direction of the resultant in terms of the forces and the angles they make with one given line in their plane.

Find the magnitude of the resultant of forces 6, 8, and 11 acting at  $120^\circ$  to each other.

7. Find the acceleration of a point moving uniformly in a circle.

A string 1 mètre long can just support a weight of 20 kilogrammes without breaking. How fast may it be rotated in a horizontal circle about one end with a mass of 10 kilogrammes attached to the other end in order that it may just not break? ( $g=980$  c.g.s. units.)

8. Define resultant pressure and centre of pressure in hydrostatics. State the rule for finding the magnitude of the former for one side of a plane area immersed in a liquid under gravity.

A cubical box, measuring 10 cm. each way, is filled with water. Find what force exerted horizontally by the top and bottom on one vertical end would be required to keep that end in position if the other sides exerted no influence.

9. Describe a simple form of compound microscope. Define its magnification.

Make a diagram tracing the rays by which the object is seen, and giving the positions and relative sizes of the object and images.

10. Explain Doppler's principle of the alteration of pitch in the note heard when the sounding body is in motion.

What application of this principle has been made in the case of light?

11. State the law connecting the pressure, volume, and temperature of a mass of gas. What are the limitations to the truth of the law?

A vessel contains air at 7 atmospheres pressure and  $12^\circ\text{C}$ . One quarter of the air is allowed to escape, the temperature sinks  $5^\circ$ , and the volume diminishes one-tenth, find the new pressure.

12. Define unit quantity of electricity and unit difference of potential in electrostatics.

Compare the amount of work done in charging a sphere of unit radius with unit charge, and the amount of work done in raising unit mass through unit distance from the ground, the units being c.g.s. where  $g=980$  numerically.

## SECOND PAPER.

FRIDAY, 5th April 1901.—11.30 to 1.30.

EIGHT Questions only to be attempted.

*Candidates are requested to answer questions 1 to 6 in one book, and questions VII. to XII. in another book.*

1. Point out the reason why the speed of sound in a gas is independent of the pressure. For what reasons does the speed of sound in air change with altitude?

2. What is meant by the terms *Pitch*, *Pure Tone*, and *Harmonic*? In what respects can one musical note of given pitch differ from another of the same pitch?

3. What is meant by compressibility? Show how to find the change in depth of the sea if gravity ceased to act.

4. Find the pressure of air inside a soap bubble of two inches radius, the surface tension being 3.5 grains weight per linear inch. What points would have to be considered in calculating the size which the same bubble would assume if its surface tension were reduced in a given proportion, and why?

5. What is meant by *Stationary Waves*? Explain how they are produced.

6. Give the essential difference between *Waves* and *Ripples*, and show that there is a critical size of disturbance which runs with minimum speed.

VII. Explain the terms *Diathermancy* and *Fluorescence*, and

indicate their practical importance in the study of special kinds of radiations.

**VIII.** Mention some experimental illustrations of the principle that the radiative and absorptive powers of a body are equal. In particular, sketch the line of argument by which we conclude that there is sodium vapour in the solar atmosphere.

**IX.** What is meant by a *Cycle of Operations* and by *Reversibility* in the theory of heat? What inference may we draw from the fact that irreversibility is the characteristic of natural phenomena?

**X.** What thermal changes accompany the liquefaction of a solid and the evaporation of a liquid? Give reasons. Show also how the phenomenon is made use of in determining the humidity of the atmosphere.

**XI.** State *Ohm's* and *Joule's Laws*, and show how the latter may be deduced from the former.

Two silver wires whose lengths are as 2 to 1 and areas of section as 1 to 4 are joined in multiple arc, and a current is passed through the combined conductor from junction to junction. Compare the amounts of heat developed simultaneously in the wires, and the rates of rise of temperature.

**XII.** Give the laws of induction of currents by changes in the magnetic field in the region occupied by the conductor, and show how their direction may be determined by application of the principle of the conservation of energy. Describe and explain the *Arago Disk* experiment.

## ASTRONOMY.

### FIRST PAPER.

THURSDAY, 28th March 1901.—11.30 A.M. to 1.30 P.M.

[Not more than FOUR Questions to be answered.]

1. Describe the striding level of a transit instrument and explain why it is necessary to reverse it. If the west end of



the axis is  $i''$  above the horizontal line, prove that the correction for inclination to the observed time of transit is  $\frac{i}{15} \cdot \frac{\cos(\phi - \delta)}{\cos \delta}$ , where  $\phi$  is the latitude and  $\delta$  the declination of the star observed.

2. Describe the principal forms of reflecting telescopes in use, and state the reason why reflectors were originally introduced. Why are reflectors especially suitable for celestial photography?

3. Define the magnifying power of a telescope, and show how it may be determined. Why would it be wasteful to employ a power of 50 on a telescope of 30 inches aperture?

4. Develop the formula for finding the time by a single observed altitude of the sun, the latitude being known. Why ought the sun *not* to be near the meridian?

5. State the principal reasons why the body of the sun must be gaseous and not composed of liquid matter.

6. The moon revolves round the earth in 27 days 8 hours. Assuming that her distance from the centre of the earth is 60 times the earth's radius (which may be taken as 4000 miles), find the approximate value of the acceleration of gravity at the surface of the earth.

### EXTRA QUESTIONS.

[Two at least of these must be attempted by B.Sc. Candidates, who may restrict themselves to **SIX** Questions in all.]

*Time allowed for B.Sc. Candidates.*—10.30 A.M. to 1.30 P.M.

1. Assuming the earth to be spherical, its radius to be  $r$ , and the distance of a planet from the centre of the earth to be  $d$ , prove that the parallax is  $p'' = 206265 \frac{r}{d} \sin z$ ,  $z$  being the zenith distance. Define equatoreal horizontal parallax.

2. What is meant by annual parallax, and how is it determined?

3. Show how the excentricity of a terrestrial meridian may be found by measuring the length of a degree in two different latitudes.

4. How can the latitude of a station be found by observations of transits of stars over the prime vertical?

## SECOND PAPER.

THURSDAY, 28th March 1901.—2.30 to 4.30 o'clock.

[Not more than FOUR Questions to be answered.]

1. Develop the formulæ for reducing observations made with a ring micrometer, and examine under what circumstances the observations may be made most advantageously.

2. The values of a function being known for a series of equidistant dates, show how the method of interpolation may be used for finding the values for intermediate dates, extending the process to fourth differences.

3. Give some account of the statical theory of the tides. Show by a diagram why the two tides of the day in high latitudes (and where local circumstances do not interfere) differ greatly in magnitude, when the moon is at its greatest north or south declination.

4. What is meant by "error of run" of a microscope on a transit circle, and how may it be removed or its amount determined?

5. State the approximate law of the variation of refraction with the zenith distance. How does the temperature and pressure of the air affect refraction? How may the amount of refraction be determined by observations?

6. How can the variation of the force of gravity at different parts of the earth be determined by pendulum experiments?

## CHEMISTRY.

*See Papers under Faculty of Medicine.*

## BOTANY.

TUESDAY, 26th March 1901.—10 to 12 o'clock.

*Illustrate your answers by drawings.*

1. Write an account of the forms of heterotrophy found amongst plants.

2. What is the structure of an ovule? Indicate the uses of its several parts. In what parts are differences generally found in the ovules of gamopetalous and polypetalous plants? Mention any exceptions you know of.

3. Describe the structure and development of the cystocarp in Polysiphonia.

4. Write a comparative account of the Lycopodineae.

5. What are the chief anatomical peculiarities characteristic of aquatic Phanerogams, and what special relation do they exhibit in connection with the mode of life of these plants?

## PRACTICAL BOTANY.

FRIDAY, 29th March 1901.—10 A.M. to 1 P.M.

1. Make a transverse section of specimen *A*. Sketch and describe it, naming its parts. *A*=*Drimys*.

2. Sketch, describe, and identify specimens *B*, *C*, *D*.

*B*=Red alga. *C*=Ovary and ovule of *Caltha*.

*D*=Mass capsule.

3. By means of the Flora provided identify specimen *E*.

*E*=*Saxifraga appasitifolia*.

4. Refer specimens *F*, *G* to their natural orders.  
*F* = Hibiscus.                      *G* = Pentas.
5. Sketch, compare, and identify specimens *H*, *I*.  
*H* = Vitis tendril.                      *I* = Acacia seedling.

## ZOOLOGY.

TUESDAY, 26th March 1901.—1 to 3 o'clock.

1. Compare and contrast the digestive and respiratory organs of Anodon, Buccinum, and Helix, explaining how they are adapted in each case to the special mode of life.
2. Classify the following as fully as possible, stating the characters on which you rely:—Amphioxus, Myxine, Raia, Rana, Lacerta, Columba, and Lepus.
3. Give an account of the following larval forms, mentioning the groups of which they are typical:—Trochosphere, Nauplius, Veliger, Auricularia, Zoa, Bipinnaria.
4. Write a short essay on Variation.
5. How does the early development of a rabbit (from fertilisation up to the eighth day inclusive), differ from that of a dog-fish or skate?

## GEOLOGY AND MINERALOGY.

MONDAY, 25th March 1901.—1 to 3 P.M.

(Only SIX Questions to be attempted.)

1. Give the mineralogical characters of Graphite, Opal, Leucite, Topaz, Rock-salt, and Barytes.
2. Describe the following rocks, giving their petrographical characters and the mode of their occurrence:—Gabbro, Gneiss, Clay-slate, Blackband-ironstone, Phyllite, and Anthracite.
3. Describe the structure of a Crinoid.
4. Indicate the more remarkable characters that distinguished

the vascular cryptogams of palaeozoic times from any existing acrogens.

5. Give some account of the Triassic rocks of Britain. Under what conditions are they believed to have been accumulated? What notable forms of life made their earliest appearance in Triassic times?

6. What are the distinguishing characters of normal faults and overthrust faults respectively? In what regions are the latter of most frequent occurrence?

7. What are the chief kinds of evidence that prove an unconformity?

8. How would you ascertain the intrusive character of a sheet of basalt in the absence of any section showing its junction with the strata amongst which it occurs?

9. What evidence is relied upon to show that boulder-clay is of the nature of a bottom- or ground-moraine?

10. Give some account of the mammalian fauna with which palaeolithic man was contemporaneous in England.

## IV.—HISTORY AND LAW.

### BRITISH HISTORY.

#### FIRST PAPER.

MONDAY, 1st April 1901.—12 to 2 o'clock.

*N.B.*—Not more than SEVEN questions to be attempted, and not more than FOUR in either Section.

#### SECTION I.

1. Describe the work of Ethelbert of Kent, Oswiu of Northumbria, and Egbert and Athelstan of Wessex, in its bearing on the consolidation of England.

2. "Ethelred the Unready." Explain the meaning of the epithet, and the significance of his reign.

3. Estimate the influence of the Norman Conquest of England upon the history of Scotland.

4. What were the foreign dominions of Henry II, how did he acquire them, and when was their connection with England finally severed?

5. Criticise the claims of Simon de Montfort to be regarded as the founder of the House of Commons.

6. Explain briefly the following:—Edgar's Ordinance of the Hundred; the Oath of Salisbury; the Treaty of Falaise; the Statute of Quia Emptores; the Confirmation of the Charters in 1297.

7. Indicate some of the lines on which the conduct of Edward I towards Scotland may be defended.

## SECTION II.

8. What were the chief causes of Edward III's war with France?

9. Explain the following:—The Burnt Candlemas, the Foul Raid, Clean the Causeway, and the Ill Raid.

10. Sketch the career *either* of Cardinal Beaufort, *or* of Warwick the King-Maker.

11. Show the importance of the Tudor reigns in the history of the relations between England and Ireland.

12. "Wolsey was patriotic in his way, for he sought the exaltation of England." Comment on this statement.

13. Describe the events that led to the dethronement of Mary Stuart.

14. Estimate the importance of the questions at issue in the quarrel between England and Spain in the reign of Elizabeth.



SECOND PAPER.

MONDAY, 1st April 1901.—3 to 5 P.M.

(Not more than SEVEN questions to be attempted, and not more than FOUR in either Section.)

SECTION I.

1. Discuss the statement that "the object of the first two Stuart kings in England was to imitate their Tudor predecessors."

2. Show the importance of foreign politics in exciting hostility in England against the Government of Charles I.

3. Contrast the character and aims, both political and religious, of the Independents and Presbyterians in the reign of Charles I.

4. Note the chief turning points in the military history of the Great Rebellion, both in England and in Scotland.

5. Describe Cromwell's policy in Scotland.

6. Sketch the career and estimate the character of the first Earl of Shaftesbury.

7. Contrast the principles of Tories and of Whigs at the time when these party-names came into use.

SECTION II.

8. "The Revolution of 1688-9 redressed the balance of power in Europe." Illustrate this statement.

9. Give a brief account of the following: --The Septennial Act, the Peerage Bill, Wood's Halfpence, the Stamp Act, the Middlesex Election.

10. What immediate results to Scotland followed the '45?

11. Estimate the merits and defects of the elder Pitt as a statesman.

12. What is the meaning of "Grattan's Parliament," and

how did it lead to the legislative union between Great Britain and Ireland?

13. What circumstances aided or impeded Wellington in the Peninsular War?

14. Sketch the history of the movement for Catholic emancipation, and show the conditions under which it was ultimately successful.

## CONSTITUTIONAL LAW AND HISTORY—

### ROMAN LAW—PUBLIC LAW.

*See Papers under Faculty of Law.*

## ART AND ARCHÆOLOGY.

### FIRST PAPER—HISTORICAL.

FRIDAY, 29th March 1901.—11 A.M. to 1 P.M.

*Not more than SEVEN questions to be attempted.*

1. Notice briefly the principal remains left by Neolithic man, and account for the difference in appearance between Paleolithic and Neolithic stone implements.

2. Describe three forms of Egyptian tomb.

3. Draw a sketch-plan of the Palace of Sargon at Khorsabad, marking the position of the principal groups of apartments, and describe the decorative treatment of the walls of the courts and rooms of state.

4. Herodotus, in his first book, tells how the Phœnician traders carried their wares to the shores of Greece. Indicate the artistic objects you would expect to find among the goods thus brought, and describe their material, form, and decoration.

5. Write a note on Greek coins as exhibiting the extent of the Hellenic world of art.

6. Mention, in their proper schools, the principal Greek sculptors of the fifth century B.C.

7. Write a short account of the mode of Christian burial in the Catacombs, and describe a cubiculum.

8. Describe carefully the tomb of Galla Placidia at Ravenna with special reference to its decoration in mosaic.

9. Sketch briefly the history of the stained glass window.

10. Write a succinct account of the Venetian school of painting in the fifteenth century, and notice the outside influences that affected it.

11. State what you know about one item in each of the three following groups:—

(a) The shield of Achilles; the chest of Cypselus; the group of Harmodius and Aristogeiton; the Discobolus of Myron.

(b) The tomb of Edward II in Gloucester Cathedral; Giotto's Campanile at Florence; the Old Testament Gate by Ghiberti.

(c) The Campo Santo at Pisa; Angelico's frescoes in San Marco, Florence; Holbein's Dance of Death.

12. Into what three periods is the life of Raffael divided? Give approximate dates, and mention one characteristic work from each.

13. Give some idea of the magnitude of the work executed by Michelangelo on the roof of the Sistine Chapel, and describe any one of the Prophets or Sybils.

14. Indicate the different kinds of pictures executed by the Dutch painters (excluding Rembrandt and Hals), and refer to any works that show the characteristic merits of the school.

FRIDAY, 29th March 1901.—3 to 5 P.M.

SECOND PAPER.—CRITICAL AND TECHNICAL.

*Not more than SEVEN questions to be attempted.*

1. Convey in a few words a general suggestion, noting form and decoration, for a suitable and artistic public monument to the late Queen Victoria.
2. Write a note on the practical usefulness to man of different forms of art in the primitive condition of humanity.
3. What principles should govern the artistic treatment of the plate, china, etc., used in the service of the table?
4. What are the chief characteristics in which the Greek temple shows an architectural advance on the monuments of Egypt? In what æsthetic qualities does the mediæval church exhibit an advance beyond the former?
5. Wherein would you say resides the special artistic greatness of the sculpture of Pheidias?
6. Notice the various points of interest that occur to you in connection with the earliest representations in art of the person and of the acts and experiences of Christ.
7. Describe the form, method of fabrication, and adornment of the mediæval chalice of the twelfth century.
8. Explain the advantages of the pointed over the round arch as shown in the construction of the French Gothic churches.
9. Give an account of a single day's work of a great fresco painter and his assistants engaged on an important mural decoration.
10. Select three works by Titian which specially exhibit his qualities of (a) poetry, (b) religious feeling, (c) dramatic force, and discuss them critically.
11. State the limitations within which the old frescoist worked in his representation of natural scenes, and show how

the scope of painting was extended by Rembrandt and the painters of the seventeenth century.

12. How would you vindicate the impressionist painter from the charge of neglecting the facts of nature?

## Examination Papers for Degree of M.A. with Honours.

### (A)—CLASSICS.

#### L A T I N (PRESCRIBED BOOKS).

WEDNESDAY, 3rd April 1901.—2 to 5 o'clock.

Translate:—

1. GR. Quam mox licet te compellare, Daemones?  
 D. quid est negoti, Gripe? GR. de illo vidulo,  
 si sapias, sapias; habeas quod di dant boni.  
 D. aequom videtur tibi, ut ego, alienum quod est,  
 meum esse dicam? GR. quodne ego inveni in mari?  
 D. tanto illi melius obtigit qui perdidit;  
 tuom esse nihilo magis oportet vidulum.  
 GR. isto tu pauper es, quom nimis sancte pin's.  
 D. O Gripe, Gripe, in aetate hominum plurimae  
 fiunt transennae, ubi decipiuntur dolis.  
 atque edepol in eas plerumque esca imponitur:  
 quam si quis avidus poscit escam avariter,  
 decipitur in transenna avaritia sua.  
 ille qui consulte docte atque astute cavet,  
 diutine uti bene licet partum bene.  
 mihi istaec videtur praeda praedatum irier,  
 ut cum maiore dote abeat quam advenerit.

2. Dicere porro ignem res omnis esse, neque ullam rem veram in numero rerum constare nisi ignem, quod facit hic idem, perdelirum esse videtur. nam contra sensus ab sensibus ipse repugnat et labefactat eos, unde omnia credita pendent, unde hic cognitus est ipsi quem nominat ignem: credit enim sensus ignem cognoscere vere, cetera non credit, quae nilo clara minus sunt. quod mihi cum vanum tum delirum esse videtur: quo referemus enim? quid nobis certius ipsis sensibus esse potest, qui vera ac falsa notemus? praeterea quare quisquam magis omnia tollat et velit ardoris naturam linquere solam, quam neget esse ignis, *quidvis* tamen esse relinquat? aequa videtur enim dementia dicere utrumque.

3. Vix iam videtur locus esse qui tantos acervos pecuniae capiat. auget, addit, accumulatur: aurum, argentum ex praeda, ex manubiis, ex coronario, ad quos id cumque pervenit neque relatum est in publicum neque in monumento consumptum, id profiteri apud decemviros et ad eos referre iubet. hoc capite etiam quaestionem de clarissimis viris, qui populi Romani bella gesserunt, iudiciumque de pecuniis repetundis ad decemviros translatum videtis. horum erit nullum iudicium, quantae cuiusque manubiae fuerint, quid relatum, quid residuum sit: in posterum vero lex haec imperatoribus vestris constituitur, ut quicumque de provincia decesserit, apud eosdem decemviros quantum habeat praedae, manubiarum, auri coronarii profiteatur.

4. Coniuravere nobilissimi cives patriam incendere: Gallorum gentem infestissimam nomini Romano ad bellum arcessunt: dux hostium supra caput est. vos cunctamini etiam nunc et dubitatis, quid intra mœnia deprensus hostibus faciatis? misereamini censeo—delinquere homines adulescentuli per ambitionem—



atque etiam armatos dimittatis. ne ista vobis mansuetudo et misericordia, si illi arma ceperint, in miseriam convortat. scilicet res ipsa aspera est; sed vos non timetis eam. immo vero maxime; sed inertia et mollitia animi alius alium expectantes cunctamini, videlicet dis immortalibus confisi, qui hanc rempublicam in maximis saepe periculis servavere. non votis neque suppliciis muliebribus auxilia deorum parantur: vigilando agundo bene consulundo prospera omnia cedunt: ubi socordiae te atque ignaviae tradideris, nequiquam deos implores; irati infestique sunt.

5. Non quia, Maecenas, Lydorum quidquid Etruscos incoluit fines, nemo generosior est te, nec quod avus tibi maternus fuit atque paternus, olim qui magnis legionibus imperitarent, ut plerique solent, naso suspendis adunco ignotos, ut me libertino patre natum. cum referre negas, quali sit quisque parente natus, dum ingenuus, persuades hoc tibi vere, ante potestatem Tulli atque ignobile regnum, multos saepe viros nullis maioribus ortos et vixisse probos amplis et honoribus auctos: contra Laevinum, Valerî genus, unde Superbus Tarquinius regno pulsus fugit, unius assis non unquam pretio pluris licuisse, notante iudice quo nosti populo, qui stultus honores saepe dat indignis et famae servit ineptus, qui stupet in titulis et imaginibus. quid oportet nos facere a vulgo longe longeque remotos? namque esto, populus Laevino mallet honorem quam Decio mandare novo, censorque moveret Appius, ingenuo si non essem patre natus—vel merito, quoniam in propria non pelle quiessem. sed fulgente trahit constrictos gloria curru non minus ignotos generosis.

6. de Brutis, Fortuna, queror. quid tempora legum  
 eginus aut annos a consule nomen habentis?  
 felices Arabes Medique Eoaque tellus,  
 quam sub perpetuis tenuerunt fata tyrannis.  
 ex populis qui regna ferunt sors ultima nostra est,  
 quos servire pudet. sunt nobis nulla profecto  
 numina: cum caeco rapiantur saecula casu,  
 mentimur regnare Iouem. spectabit ab alto  
 aethere Thessalicas, teneat cum fulmina, caedes?  
 scilicet ipse petet Pholoen petet ignibus Oeten  
 immeritaeque nemus Rhodopes pinusque Mimantis:  
 Cassius hoc potius feriet caput? astra Thyestae  
 impulit et subitis damnavit noctibus Argos:  
 tot similes fratrum gladios patrumque gerenti  
 Thessaliae dabit ille diem?

7. Quid enim aliud laeso patrono concessum quam ut centesimum ultra lapidem in oram Campaniae libertum releget? ceteras actiones promiscas et pares esse.tribuendum aliquod telum quod sperni nequeat. nec grave manu missis per idem obsequium retinendi libertatem, per quod assecuti sint: at criminum manifestos merito ad servitutem retrahi, ut metu coerceantur quos beneficia non mutavissent.

Disserebatur contra: paucorum culpam ipsis exitiosam esse debere, nihil universorum iuri derogandum; quippe late fustum id corpus. hinc plerumque tribus, decurias, ministeria magistratibus et sacerdotibus, cohortes etiam in urbe conscriptas; et plurimis equitum, plerisque senatoribus non aliunde originem trahi: si separarentur libertini, manifestam fore penuriam ingenuorum. non frustra maiores, cum dignitatem ordinum dividerent, libertatem in communi posuisse. quin et manu mittendi duas species institutas, ut relinqueretur paenitentiae aut novo beneficio locus. quos vindicta patronus non liberaverit, velut vinculo servitutis attineri.

THURSDAY, 4th April 1901.—2 to 5 o'clock.

I.

1. Translate, with short grammatical notes :—

- (a) abi rus, abi dierecte, abscede ab ianua.
- (b) mirum quin vigilantī diceret.
- (c) quid tibi, malum, me aut quid ego agam curatior ?
- (d) scio qua me ire oportet et quo venerim novi locum.
- (e) adversum veniri mihi ad Philolachetem  
volo temperi. audi.
- (f) scibis faxo (*compared with faxo scias*).
- (g) comisatum omnes veniote ad me ad annos sedecim.

Give the scansion of passages (a), (c), (d), and (e) ; point out any words that illustrate the "Law of Breves Breviantes," and state the Law shortly.

2. Translate and explain :—

- (a) tempus item per se non est, sed rebus ab ipsis  
consequitur sensus, transactum quid sit in aevo,  
tum quae res instet, quid porro deinde sequatur.
- (b) quo pacto verba quoque ipsa  
inter se paulo mutatis sunt elementis,  
cum ligna atque ignes distincta voce notemus.
- (c) Caecubum et prelo domitam Caleno  
tu bibes uvam.  
(vides, *Munro*.)
- (d) quid dedicatum poscit Apollinem  
vates ?
- (e) paene occupatam seditionibus  
delevit urbem Dacus et Aethiops.
- (f) et laribus tuum  
miscet numen, uti Graecia Castoris  
et magni memor Herculis.
- (g) nos manet Oceanus circumvagus. arva, beata  
petamus arva, divites et insulas.

(h) sed quadringentis sex septem milia desunt.  
plebs eris.

(i) laevo suspensi loculos tabulamque lacerto.

Discuss very briefly the grammatical construction of such passages.

(j) Caesareas spectate cruces, spectate catenas  
et caput hoc positum rostris effusaque membra  
saeporumque nefas et clausi proelia campi.

(k) non illum Poenus humator  
consulis et Libyca succensae lampade Cannae  
compellunt, hominum ritus ut servet in hoste,  
sed meminit nondum satiata caedibus ira  
cives esse suos.

3. Translate, with short historical notes:—

(a) C. Gracchus legem tulit, ne de capite civium Romanorum  
iniussu vestro iudicaretur: hic popularis a II viris  
iniussu vestro, non iudicari de cive Romano, sed  
indicta causa civem Romanum capitis condemnari  
coegit. (CIC. *Pro Rabirio*, 12.)

(b) At vero nos vicesimum iam diem patimur hebescere  
aciem horum auctoritatis.

(CIC., *In Catil.*, i. 4.)

(c) Galli cito cognito consilio sine mora praetoribus se  
tradunt. (SALL., *Catil.*, 45.)

(d) Omnia, quae per hoc triennium agitata sunt, quo a  
L. Catilina et Cn. Pisone initum consilium senatus  
interficiendi scitis esse, in hos dies, in hos menses,  
in hoc tempus erumpunt.

(CIC., *Pro Mur.*, 81.)

(e) transfertur regimen cohortium ad Afranium Burrum,  
egregiae militaris famae, gnarum tamen cuius sponte  
praeficeretur. (TAC., *Ann.*, xii. 42.)

(f) igitur quasi iam depulso Nerone, quisnam deligeretur,

anquirebant: et omnium ore Rubellius Plautus celebratur, cui nobilitas per matrem ex Iulia familia.  
(TAC. *Ann.* xiv. 22.)

4. (a) At nunc natus infans delegatur Graeculae alicui ancillae, cui adiungitur unus aut alter ex omnibus servis, plerumque vilissimus nec cuiquam serio ministerio adcommodatus.

(b) Sequitur autem ut materiae abhorrenti a veritate declamatio quoque adhibeatur.

(c) Supervacuus esset inter innocentes orator.

Explain these passages with reference to the general drift of the argument in the latter part of the *Dialogue de Oratoribus*.

(d) Adstrictior Calvus, numerosior Asinius, splendidior Caesar, amarior Caelius, gravior Brutus, vehementior et plenior et valentior Cicero.

Translate the adjectives carefully, and add a sentence in the case of Calvus, Caelius, and Brutus, showing their probable appropriateness.

## II.—HISTORY.

Two questions should be attempted in this group.

1. Trace the relations of Etruria and Campania with Rome, and estimate their influence on Roman civilisation.

2. Distinguish the transitory and permanent effects of the legislation of the Gracchi.

3. Discuss the relation of Caesar and Crassus to the Catilinarian conspiracy.

4. Consider the relative importance, in the time of Nero, of old magistracies and the new Imperial officials. Compare briefly the state of things under Augustus, and indicate the chief changes which took place in the interval.

5. What evidence have we as to the spread of Christianity in the reign of Nero?

### III.—LITERATURE.

*Two questions should be attempted in this group.*

1. "Plautus ad exemplar Siculi properare Epicharmi."

What meaning may be put upon this statement? Explain briefly what is known about the sources or models of the Plautine drama and the Sicilian influence in particular.

2. What characteristics of Lucretius entitle him to be considered a great poet?

3. What are the sources and extent of our knowledge of the life of Lucretius?

4. What is Horace's view of the nature and value of poetry, and of the part played by the poet in the growth of civilisation?

5. Describe briefly the spirit and purpose of the "Pharsalia." Has the poem a hero? What are its chief defects?

6. "Mantica cui lumbos onere ulceret atque eques armos."

Discuss and illustrate from your reading the attitude of the ancients towards the lower animals.

FRIDAY, 5th April 1901.—9 to 12 o'clock.

For Latin Prose Composition:—

On the contrary, it was Bacon's express and repeatedly avowed intention to make philosophy leave off her habit of flying; to pluck off her wings, and to put leaden weights in their place; to hold her firmly down upon the ground, among earthly things, where Bacon himself lived, with all his inclinations. Bacon wished to transform philosophy, from a roving spirit that looks downward from above, into a human being, that cautiously ascends by the toilsome road of experience. When Bacon as a political character, takes the same road, and stumbles so often on this steep, rugged, intricate path of life,



he does not, therefore, become a creeping snake. If everything that crept was necessarily a snake, it would be bad indeed: and I verily believe that whoever, under similar circumstances, pursues the same path as Bacon, will often find himself in such a strait that he will be compelled to creep.

I well know the objections that will be made here. The blemishes of Bacon's life are not mere human errors and weaknesses, but debased sentiments and political crimes. This I do not pretend to deny: much less would I defend delinquencies which are proved beyond the possibility of doubt. The unworthy sentiments are open to view; the crimes are acknowledged by Bacon himself; they have sullied his public name, and if they are designated in the hardest terms, I offer no objection: only to me these single traits are not all the indices of his character. As far as I see, the character would have been precisely the same if the unworthy sentiments had not been so obviously manifest: if the crimes had not been committed. I could well imagine that with greater prudence Bacon might have avoided either the crimes themselves, or the whole weight of responsibility attached to them; but in that case I should not think a whit the better of him, or a whit the worse. He would then have been a more cunning, but not a better man. Indeed a thorough-paced scoundrel, an accomplished plotter would never have fallen into such open guilt.

SATURDAY, 6th April 1901.—2 to 5 o'clock.

Translate:—

1. Nunc age, naturas apibus quas Iuppiter ipse  
addidit, expediam, pro qua mercede, canoros  
Curetum sonitus crepitantiaque aera secutae,  
Dictae caeli regem pavere sub antro.  
solae communis natos, consortia tecta

urbis habent, magnisque agitant sub legibus aevom,  
 et patriam solae et certos novere penatis;  
 venturaeque hiemis memores aestate laborem  
 experiuntur et in medium quaesita reponunt.  
 namque aliae victu invigilant et foedere pacto  
 exercentur agris; pars intra saepta domorum  
 narcissi lacrimam et lentum de cortice gluten  
 prima favis ponunt fundamina, deinde tenacis  
 suspendunt ceras; aliae spem gentis adultos  
 educunt fetus; aliae purissima mella  
 stipant et liquido distendunt nectare cellas.  
 sunt quibus ad portas cecidit custodia sorti,  
 inque vicem speculantur aquas et nubila caeli;  
 aut onera accipiunt venientum, aut agmine facto  
 ignavom fucos pecus a praesepibus arcent.  
 fervet opus, redolentque thymo fragrantia mella.

(VIRGIL, *Georgics* IV. 149-169.)

2. Et videte, quantum inter meam sententiam vestramque intersit, tribuni. vos, etiamsi tunc faciundum non fuerit, nunc utique faciendum putatis: ego contra—nec id mirati sitis, priusquam quale sit audieritis—etiam si tum migrandum fuisset incolumi tota urbe, nunc has ruinas relinquendas non censerem. quippe tum causa nobis in urbem captam migrandi victoria esset, gloriosa nobis ac posteris nostris; nunc haec migratio nobis misera ac turpis, Gallis gloriosa est. non enim reliquisse victores, sed amisisse victi patriam videbimur; hoc ad Alliam fuga, hoc capta urbs, hoc circumsessum Capitolium necessitatis imposuisse, ut desereremus penates nostros, exiliumque ac fugam nobis ex eo loco conscisceremus, quem tueri non possemus. et Galli evertere potuerunt Roman, quam Romani restituere non videbuntur potuisse? quid restat, nisi ut, si iam novis copiis veniant—constat enim, vix credibilem multitudinem esse—et habitare in capta ab se, deserta a vobis hac urbe velint, sinatis?

LIVY, V. c. 53, §§ 3-6.

3. Vix memorem cunctos, etsi bene gessimus, actus.  
 nunc docet ingentes saltu me iungere fossas,  
 nunc caput aerii scandentem prendere montis,  
 quo fugitur per plana gradu, simulacraque pugnae  
 excipere immissos curvato umbone molares,  
 ardentesque intrare casas peditemque volantes  
 sistere quadriiugos. memini, rapidissimus ibat  
 imbribus adsiduis pastus nivibusque solutis  
 Spercheos vivasque trabes et saxa ferebat :  
 cum me ille immissum, qua saevior impetus undae,  
 stare iubet contra tumidosque repellere fluctus  
 quos vix ipse gradu totiens obstante tulisset.  
 stabam equidem, sed me referebat concitus amnis  
 et latae caligo fugae : ferus ille minari  
 desuper incumbens verbisque urgere pudorem.  
 nec nisi iussus abi : sic me sublimis agebat  
 gloria nec duri tanto sub teste labores.  
 nam procul Oebalios in nubila condere discos  
 et liquidam nodare palen et spargere caestus  
 ludus erat requiesque mihi ; nec maior in istis  
 sudor, Apollineo quam fila sonantia plectro  
 cum quaterem priscosque virum mirarer honores.  
 quin etiam sucos atque auxiliantia morbis  
 gramina, quo nimius staret medicamine sanguis,  
 quid faciat somnos, quid hiantia vulnera claudat,  
 quae ferro cohibenda lues, quae cederet herbis,  
 edocuit monitusque sacrae sub pectore fixit  
 iustitiae, qua Peliacis dare iura verenda  
 gentibus atque suos solitus placare bifformes.  
 hactenus annorum, comites, elementa meorum  
 et memini et meminisse iuvat : scit cetera mater.

(STATIUS, *Ach.* II., 422-452.)

4. Finis vitae eius nobis luctuosus, amicis tristis, extraneis

etiam ignotisque non sine cura fuit. vulgus quoque et hic aliud agens populus et ventitavere ad domum et per fora et circulos locuti sunt: nec quisquam audita morte Agricolae aut laetatus est aut statim oblitus est. augebat miserationem constans rumor veneno interceptum. nobis nihil comperti adfirmare ausim; ceterum per omnem valetudinem eius crebrius quam ex more principatus per nuntios visentis et libertorum primi et medicorum intimi venire: sive cura illud sive inquisitio erat. supremo quidem die momenta deficientis per dispositos cursores nuntiata constabat; nullo credente sic adcelerari quae tristis audiret. speciem tamen doloris animo vultuque prae se tulit, securus iam odii et qui facilius dissimilaret gaudium quam metum. satis constabat lecto testamento Agricolae, quo coheredem optimae uxori et piissimae filiae Domitianum scripsit, laetatum eum velut honore iudicioque: tam caeca et corrupta mens adsiduis adulationibus erat, ut nesciret a bono patre non scribi heredem nisi malum principem.

(TACITUS, *Agric.*, c. 43.)

## GREEK—CRITICAL AND GENERAL PAPER.

WEDNESDAY, 3rd April 1901.—9 to 12 o'clock.

### 1. Translate, with notes on points of syntax:—

- (a) ἄλλ' ἐρέω μὲν ἐγὼν, ἵνα εἰδότες ἢ κε θάνωμεν  
ἢ κεν ἀλευάμενοι θάνατον καὶ κῆρα φύγοιμεν.  
(b) ἦ μὲν διὴ νῶϊ ξεινήρια πολλὰ φαγόντε  
ἄλλων ἀνθρώπων δεῦρ' ἰκόμεθ', αἶ κέ ποθι Ζεὺς  
ἐξοπίσω περ παύσῃ οἰζύος.  
(c) ἔνθ' ἐμὲ μὲν πρῶτισθ' ἔταροι λίσσοντ' ἐπέεσσι  
τυρῶν αἰνυμένους ἰέναι πάλιν.  
(d) σὺ δ' εὖ κρίνασθαι ἐταίρους  
τρεῖς.

- (e) Αἰθίοπας, τοὶ διχθὰ δεδαίεται, ἔσχατοι ἀνδρῶν,  
οἱ μὲν δυσομένου Ὑπερίονος, οἱ δ' ἀνιόντος.
- (f) κοῦροι δὲ κρητῆρας ἐπεστέψαντο ποτοῖο  
νώμησαν δ' ἄρα πᾶσιν ἐπαρξάμενοι δεπάεσσιν.
- (g) νῆσφ' ἐν ἀμφιρύτῃ, ὅθι τ' ὀμφαλός ἐστι θαλάσσης,  
νῆσος δενδρήεσσα, θεὰ δ' ἐν δώματά ναίει.

2. Translate, with explanatory notes on the subject matter:—

(1) Ὅτι μὲν οὖν οὔτε τὰγαθὸν ἢ ἡδονή, οὔτε πᾶσα αἴρεσις, δῆλον οἶκεν εἶναι, καὶ ὅτι εἰσὶ τινες αἰρεταὶ καθ' αὐτὰς διαφέρονται τῷ ἰδεῖν ἢ ἀφ' ὧν.

(2) Ὁ δὲ χρηματιστὴς βέλαιός τις ἔστιν, καὶ ὁ πλοῦτος δῆλον ὅτι ἐν τῷ ζητούμενον ἀγαθόν· χρήσιμον γὰρ καὶ ἄλλον χάριν. Διὸ ἄλλον τὰ πρότερον λεχθέντα τέλη τις ἂν ὑπολάβοι· δι' αὐτὰ γὰρ γαπᾶται. Φαίνεται δ' οὐδ' ἐκεῖνα· καίτοι πολλοὶ λόγοι πρὸς αὐτὰ ἀταβέβληνται.

(3) Ἐκουσίῳ δὲ μᾶλλον οἶκεν ἢ ἀκολασίᾳ τῆς δειλίας. Ἡ μὲν ἂρ οὐκ ἡδονή, ἢ οὐκ διὰ λύπην, ὧν τὸ μὲν αἰρετὸν, τὸ δὲ φερκτόν.

(4) Οὐτ' ἄρα φύσει οὔτε παρὰ φύσιν ἐγγίνονται αἱ ἀρεταὶ ἀλλὰ πεφκκόσι μὲν ἡρῆν δέξασθαι αὐτὰς, τελειομέναις δὲ διὰ τοῦ θους.

(5) Ἐλευθεριώτεροι γὰρ εἶναι δοκοῦσιν οἱ μὴ κτηνόμενοι ἀλλὰ ἱραλαβόντες τὴν οὐσίαν· ἄπειραί τε γὰρ τῆς ἐνδεείας, καὶ πάντες γαπῶσι μᾶλλον τὰ αὐτῶν ἔργα, ὥσπερ οἱ γονεῖς καὶ οἱ ποιηταί.

3. Translate, with notes explanatory or critical:—

(a) γράμματα δ' ἐν φλοιῷ γεγράψεται, ὡς παριών τις  
ἀννειμῇ Δωριστί, “σέβον μί· Ἐλένας φυτὸν εἰμί.”

(b) καὶ τις τῶν τραφερῶν ὠρέξατο.

(c) μᾶ, πόθεν ὦνθρωπος; τί δὲ τίν, εἰ κωτίλαι εἰρές;  
πασάμενος ἐπίτασσε. Συρακοσίαις ἐπιτάσσεις;  
ὡς εἰδῆς καὶ τοῦτο· Κορίνθιαι εἰρές ἄνωθεν,  
ὡς καὶ ὁ Βελλεροφῶν.

(d) καὶ τὸν ἀπὸ γραμμῆς κινεῖ λίθον.

(e) οὐ τὸν ἐμὸν τὸν ἕνα γλυκὺν ᾧ ποθόρουμι  
ἐς τέλος.

(f) τὸ παιδίον οὐ πρὶν ἀνησεῖν  
φατὶ πρὶν ἀκρατιστὸν ἐπὶ ξηροῖσι καθίξῃ.

(g) τρίς δ' ἄρ' ὁ παῖς ὑπάκουσεν, ἀραιὰ δ' ἔκετο φωνά  
ἐξ ὕδατος, παρεὼν δὲ μάλα σχεδὸν εἶδετο πόρρω.

4. Translate, with critical notes :—

(a) μηνύεται οὖν ἀπὸ μετοίκων τινῶν.

Cobet, ὑπό.

(b) μᾶλλον αὐτοὺς ἐσθίει τά δεινὰ ἢ ὅτε ἐψηφίζοντο πλεῖν.

ἦ . . . πλεῖν om. Cobet as “*emblema sciolii*.”

(c) ἐλπίζειν γὰρ ἀπ' αὐτοῦ τι ἔργον ἄξιον τοῦ κινδύνου κατεργά-  
σεσθαι.

L. κατεργάσασθαι.

(d) νομίσας οὐχ οἶόν τ' εἶναι διατρίβειν οὐδέ παθεῖν ὅπερ ὁ  
Νικίας ἔπαθεν.

παθεῖν <δεῖν> conjec. Classen.

(e) οὐ τοῖς αὐτοῖς ψηφιεῖσθαι τε περὶ σφῶν αὐτῶν καὶ τὰ  
πράγματα ὥσπερ καὶ αὐτοὶ ὀρῶντας καὶ οὐκ ἄλλων ἐπιτιμήσει  
ἀκούσαντας γινώσσεσθαι, ἀλλ' ἐξ ὧν ἂν τις εἰ λέγων διαβάλλοι, ἐκ  
τούτων αὐτοὺς πείσεσθαι.

5. Translate, with notes, restoring the text in (c):—

(a) ἄθλησαν ἐπ' Ἀρχεμόρῳ.

(b) πενταέθλοισιν γὰρ ἐνέπρεπεν ὥς  
ἄστρον διακρίνει φάη  
νυκτὸς διχομήνιδος εὐφεγγῆς σελάνα.

(c) ἔκετ . . . . ν παρὰ πορφυροδίαν,  
τοῦ κ . . . . ἄσαν χθόνα  
ἦλθε . . . ἐπ' ἔσχατα Νείλου·  
ταί τ' ἐπ' ἐ . . αἰ πόρῳ  
οἰκέεσι Θερμώδοντος, ἐγχέων  
ἵστορες κοῦραι διωξίπποι' Ἀρηος,  
σῶν, ᾧ πολυζήλωτε ἀναξ ποταμῶν,  
ἐγγόνων γεύσαντο, καὶ ὑψιπύλου Τροίας ἔδος.



- (d) Πολυπήμονός τε καρτεράν  
σφῦραν ἐξέβαλεν Προκόπτας.

### LITERATURE.

6. Write on any *two* of the following subjects:—  
 (1) The Speeches of Thucydides.  
 (2) The Dialect of Theocritus.  
 (3) The literary characteristics of Pindar.  
 (4) Homer and the Ballad.  
 (5) Aristotle's argument against the Ideal Good of Plato.  
 (6) "The poets, not the priests, were the theologians of Greece."

### HISTORY.

7. Write on any *two* of the following:—  
 (1) καὶ οὐ πρότερον ἐνέδοσαν (sc. οἱ Ἀθηναῖοι) ἢ αὐτοὶ ἐν  
σφίσι κατὰ τὰς ἰδίας διαφορὰς περιπεσόντες ἐσφά-  
λησαν.—(Thucy. 2, 65.)  
 (2) Demosthenes and Macedon.  
 (3) The history of the archonship at Athens.  
 (4) The Athenæion Politeia and Election by Lot.  
 (5) Nikias.  
 (6) The State and the Individual at Athens.

### PRESCRIBED BOOKS.

THURSDAY, 4th April 1901.—2 to 5 o'clock.

Translate:—

1. "ξείν', οὐ καλὸν εἶπες· ἀτασθάλῳ ἀνδρὶ ἔοικας.  
οὕτως οὐ πάντεσσι θεοὶ χαρίεντα διδοῦσιν  
ἀνδράσιν, οὔτε φνὴν οὔτ' ἄρ φρένας οὔτ' ἀγορητὴν.  
ἄλλος μὲν γάρ τ' εἶδος ἀκιδνότερος πέλει ἀνὴρ,  
ἀλλὰ θεὸς μορφὴν ἔπεσι στέφει, οἱ δέ τ' ἐς αὐτὸν  
τερπόμενοι λεύσσουσιν· ὁ δ' ἀσφαλὲως ἀγορεύει

αἰδοῖ μελιχίῃ, μετὰ δὲ πρέπει ἀγρομένοισιν,  
 ἐρχόμενον δ' ἀνὰ ἄστνυ θεὸν ὥς εἰσορόωσιν.  
 ἄλλος δ' αὖ εἶδος μὲν ἀλίγκιος ἀθανάτοισιν,  
 ἀλλ' οὐ οἱ χάρις ἀμφιπεριστίφεται ἐπέεσσιν,  
 ὥς καὶ σοὶ εἶδος μὲν ἀριπρεπές, οὐδέ κεν ἄλλως  
 οὐδὲ θεὸς τεύξειε, νόον δ' ἀποφώλιός ἐστι.  
 ὦρινάς μοι θυμὸν ἐνὶ στήθεσσι φίλοισιν  
 εἰπὼν οὐ κατὰ κόσμον· ἐγὼ δ' οὐ νῆϊς ἀέθλων,  
 ὥς σύ γε μυθεῖαι, ἀλλ' ἐν πρώτοισιν οἴω  
 ἔμμεναι, ὅφρ' ἥβῃ τε πεποίθεα χερσὶ τ' ἐμῇσιν.  
 γυνὴ δ' ἔχομαι κακότητι καὶ ἄλγεσι· πολλὰ γὰρ ἔτλην,  
 ἀνδρῶν τε πτολέμους ἀλεγεινά τε κύματα πείρων.  
 ἀλλὰ καὶ ὥς κακὰ πολλὰ παθὼν πειρήσομ' ἀέθλων  
 θυμοδακῆς γὰρ μῦθος· ἐπώτρυνάς δέ με εἰπὼν."

2. Διαφέρονται δὲ καὶ ὅταν ἕτερα γίγνηται αὐτοῖς καὶ μὴ ὦν ὀρέγονται· ὅμοιον γὰρ τῷ μῆθῃ γίγνεσθαι, ὅταν οὐ ἐφίεται μὴ τυγχάνῃ, οἷον καὶ τῷ κιθαρωδῷ ὁ ἐπαγγελλόμενος, καὶ ὅσῳ ἄμεινον ἔσκειν, τοσοῦτῳ πλείω· εἰς ἧν δ' ἀπαιτοῦνται τὰς ὑποσχέσεις, αἰθ' ἡδονῆς ἡδονὴν ἀποδεδωκέναι ἔφη. Εἰ μὲν οὖν ἑκάτερος τοῦτο ἐβούλετο, ἰκανῶς ἂν εἶχεν· εἰ δ' ὁ μὲν τέρψιν, ὁ δὲ κέρδος, καὶ ὁ μὲν ἔχει, ὁ δὲ μὴ, οὐκ ἂν εἴη τὸ κατὰ τὴν κοινωνίαν καλῶς· ὦν γὰρ δεόμενος τυγχάνει, τούτοις καὶ προσέχει, κακείνου γε χάριν ταῦτα δώσει. Τὴν ἀξίαν δὲ ποτέρον τάξαι ἐστὶ, τοῦ προϊέμενου ἢ τοῦ προλαβόντος; ὁ γὰρ προϊέμενος ἔοικ' ἐπιτρέπειν ἐκείνῳ. "Ὅπερ φασὶ καὶ Πρωταγόραν ποιεῖν· ὅτε γὰρ διδάξειεν ἀδήποτε, τιμῆσαι τὸν μαθόντα ἐκέλευεν ὅσου δοκεῖ ἀξία ἐπίστασθαι, καὶ ἐλάμβανε τοσοῦτον. Ἐν τοῖς τοιοῦτοις δ' ἐνίοις ὀρέσκει τὸ "μισθὸς δ' ἀνδρί." Οἱ δὲ προλαβόντες τὸ ἀργύριον, εἴτα μῆθῃ ποιοῦντες ὦν ἔφασαν, διὰ τὰς ὑπερβολὰς τῶν ἐπαγγελῶν, εἰκότως ἐν ἐγκλήμασι γίνονται· οὐ γὰρ ἐπιτελοῦσιν ἢ ὁμολόγησαν. Τοῦτο δ' ἴσως ποιεῖν οἱ σοφισταὶ ἀναγκάζονται διὰ τὸ μῆθερα ἂν δοῦναι ἀργύριον ὦν ἐπίστανται. Οἷτοι μὲν οὖν ὦν ἔλαβον τὸν μισθὸν, μὴ ποιοῦντες εἰκότως ἐν ἐγκλήμασιν εἰσιν· ἐν οἷς δὲ μὴ γίγνεται διομολογία τῆς ὑποργίας,

οἱ μὲν δι' αὐτοὺς προϊέμενοι εἶρηται ὅτι ἀνέγκλητοι· τοιαύτη γὰρ ἡ κατ' ἀρετὴν φιλία. Τὴν ἀμοιβὴν τε ποιητέον κατὰ τὴν προαίρεσιν· αὕτη γὰρ τοῦ φίλου καὶ τῆς ἀρετῆς. Οὕτω δ' ἔοικε καὶ τοῖς φιλοσοφίας κοινωνήσασιν· οὐ γὰρ πρὸς χρήμαθ' ἢ ἀξία μετρεῖται τιμή τ' ἰσόρροπος οὐκ ἂν γένοιτο, ἀλλ' ἴσως ἱκανόν· καθάπερ καὶ πρὸς θεοὺς καὶ πρὸς γονεῖς, τὸ ἐνδεχόμενον.

3. “ἀνσταθ' Ἀμφιτρύων· ἐμέ γὰρ δέος ἴσχει ὀκνηρόν·  
 ἄνστα, μηδὲ πόδεσσιν ἑοῖς ὑπὸ σάνδαλα θεῖης.  
 οὐκ αἶεις, παίδων ὁ νεώτερος ὕσσον αὐτεῖ;  
 ἢ οὐ νοεῖς, ὅτι νυκτὸς ἄωρί που, οἱ δέ τε τοῖχοι  
 πάντες ἀριφραδέες καθαρᾶς ἄτερ ἡριγενείας;  
 ἔστι τί μοι κατὰ δῶμα νεώτερον, ἔστι, φίλ' ἀνδρῶν.”  
 “Ὡς φάθ'. ὁ δ' ἔξ εὐνᾶς ἀλόχῃ κατέβαινε πιθήσας·  
 δαιδάλεον δ' ὥρμασε μετὰ ξίφος, ὃ οἱ ὑπερθεῖν  
 κλιντήρος κεδρίνω περὶ πασσάλῃ αἰὲν ἄωρτο.  
 ἦτοι ὅγ' ὠριγνᾶτο νεοκλώστου τελαμῶνος,  
 κουφίζων ἑτέρα κολεόν, μέγα, λώτινον ἔργον.  
 ἀμφιλαφῆς δ' ἄρα παστὰς ἐνεπλήσθη πάλιν ὄρφνας·  
 δμῶας δὴ τότε' αὖσεν ὕπνον βαρὺν ἐκφυσῶντας·  
 “οὔτετε πῦρ ὅτι θᾶσσον ἀπ' ἐσχαρεῶνος ἐλόντες,  
 δμῶες ἐμοί, στιβαροὺς δὲ θινῶν ἀνακόψατ' ὀχῆας.”  
 “ἀνστατε δμῶες ταλασίφρονες. αὐτὸς αὐτεῖ.”

Ἡ ῥα γυνὰ Φοίνισσα μύλαις ἔπι κοῖτον ἔχοισα.  
 οἱ δ' αἶψα προγένοντο λύχνοις ἅμα δαιομένοισι  
 δμῶες· ἐνεπλήσθη δὲ δόμος σπενδοντος ἐκάστου.  
 ἦτοι ἄρ' ὥς εἶδοντ' ἐπιτίθιον Ἡρακλῆα  
 θῆρε δύω χεῖρεσσιν ἀπρίξ ἀπαλαῖσιν ἔχοντα,  
 συμπλήγδην ἰάχησαν· ὁ δ' ἐς πατέρ' Ἀμφιτρύωνα  
 ἔρπετὰ δεικανάασκεν, ἐπάλλετο δ' ὑψόθι χαίρων  
 κωροσύνα, γελάσας δὲ πάρος κατέθηκε ποδοῦν  
 πατρὸς ἐοῦ θανάτῳ κεκαρωμένα δεινὰ πέλωρα.

4. τόσ' εἶπεν ἀρέταιχμος ἥρως·  
 τάφον δὲ ναυβάται

φωτὸς ὑπεράφανον  
 θάρσος· Ἀλίου τε γαμβρῷ χολώθη κέαρ,  
 ὕφανέ τε ποταινίαν  
 μῆτιν, εἶπέν τε· “μεγαλοσθενὲς  
 Ζεῦ πάτερ, ἄκουσον· εἵπερ με κούρα  
 Φοίνισσα λευκώλενος σοὶ τέκε,  
 νῦν πρόπεμπ’ ἀπ’ οὐρανοῦ θεῶν  
 πυριέθειραν ἀστραπὰν  
 σάμ’ ἀρίγνωτον· εἰ  
     δὲ καὶ σὲ Τροξηνία σείσῃχθονι  
     φύτευσεν Αἴθρα Ποσει-  
     δᾶνι, τόνδε χρύσειον  
 χειρὸς ἀγλαὸν  
     ἔνεγκε κόσμον ἐκ βαθείας ἁλός,  
 δικῶν θράσει σῶμα πατρὸς ἐς δόμους.  
 εἴσαι δ’ αἶκ’ ἐμᾶς κλύῃ  
     Κρόνιος εὐχᾶς  
 ἀναξιβρόντας ὁ πάντων μεδέων.”  
 κλύε δ’ ἄμεμπτον εὐχὰν μεγασθενῆς  
 Ζεὺς, ὑπέροχόν τε Μίνῃ φύτευσε  
     τιμὰν φίλον θέλων  
 παιδα πανδερκέα θέμεν,  
 ἀστραψέ θ’· ὁ δὲ θυμάρμενον  
     ιδὼν τέρας χεῖρας πέτασσε  
     κλυτὰν ἐς αἰθέρα μενεπτόλεμος ἥρως,  
 εἶρέν τε· “Θησεῦ, τάδε  
     μὲν βλέπεις σαφῇ Διὸς  
 δῶρα· σὺ δ’ ὄρνυ’ ἐς βα-  
     ρύβρομον πέλαγος· Κρονίδας  
 δέ τοι πατὴρ ἄναξ τελεῖ  
 Ποσειδᾶν ὑπέρτατον  
     κλέος χθόνα κατ’ εὐρύεδρον.”  
     ὥς εἶπε· τῷ δ’ οὐ πάλιν

θυμὸς ἀνεκάμπτετ', ἀλλ' εὐ-  
 πάκτων ἐπ' ἱκρίων  
 σταθεὶς ὄρουσε, πόντιόν τέ νιν  
 δέξατο θελημὸν ἄλσος.  
 τάφεν δὲ Διὸς νιὸς ἐνδοθεν  
 κέαρ, κέλευσέ τε κατ' οὖ-  
 ρον ἴσχεν εὐδαίδαλον  
 νᾶα· (μοῖρα δ' ἑτέραν ἐπόρσυν' ὁδόν).

5. καὶ δεινὸν μηδενὶ ἡμῶν δόξῃ εἶναι ὅτι καὶ κατὰ θάλασσαν. τὸ γὰρ ναυτικὸν ἡμῶν, ὅπερ κακεῖνοι πυνθάνονται, τὸ μὲν πρῶτον ἤκμαξε καὶ τῶν νεῶν τῇ ξηρότητι καὶ τῶν πληρωμάτων τῇ σωτηρίᾳ· νῦν δὲ αἵ τε νῆες διάβροχοι, τοσούτον χρόνον ἤδη θαλασσεύουσαι, καὶ τὰ πληρώματα ἐφθαρται. τὰς μὲν γὰρ ναῦς οὐκ ἔστιν ἀνεκλύσαντας διαψίξαι διὰ τὸ ἀντιπάλους τῇ πλήθει καὶ ἔτι πλείους τὰς τῶν πολεμίων οὔσας ἀεὶ προσδοκίαν παρέχειν ὥς ἐπιπλείνσονται. φανεραὶ δὲ εἰσιν ἀναπειρώμεναι καὶ αἱ ἐπιχειρήσεις ἐπ' ἐκείνοις καὶ ἀποξηρῶναι τὰς σφετέρας μᾶλλον ἐξουσία· οὐ γὰρ ἐφορμοῦσιν ἄλλοις.

Ἡμῖν δ' ἐκ πολλῆς αὖ περιουσίας νεῶν μόλις τοῦτο ὑπῆρχε καὶ μὴ ἀναγκασμένοις, ὥσπερ νῦν, πάσαις φυλάσσειν. εἰ γὰρ ἀφαιρήσομέν τι καὶ βραχὺ τῆς τηρήσεως, τὰ ἐπιτήδεια οὐχ ἔξομεν, παρὰ τὴν ἐκείνων πόλιν χαλεπῶς καὶ νῦν ἐσκομίζόμενοι. τὰ δὲ πληρώματα διὰ τῶδε ἐφθάρη τε ἡμῖν καὶ ἔτι νῦν φθείρεται, τῶν ναυτῶν τῶν μὲν διὰ φρυγανισμὸν καὶ ἄρπαγὴν καὶ ὑδρείαν μακρὰν ὑπὸ τῶν ἱππέων ἀπολλυμένων· οἱ δὲ θεράποντες, ἐπειδὴ ἐς ἀντίπαλα καθεστήκαμεν, αὐτομολοῦσι, καὶ οἱ ξῆνοι· οἱ μὲν ἀναγκαστοὶ ἐσβάντες εὐθὺς κατὰ τὰς πόλεις ἀποχωροῦσιν, οἱ δὲ ὑπὸ μεγάλῳ μισθοῦ τὸ πρῶτον ἐπαρθέντες καὶ οἰόμενοι χρηματιεῖσθαι μᾶλλον ἢ μαχεῖσθαι, ἐπειδὴ παρὰ γνώμην ναυτικόν τε δὴ καὶ ἄλλα ἀπὸ τῶν πολεμίων ἀνθεστώτα ὀρώσιν, οἱ μὲν ἐπ' αὐτομολίας προφάσει ἀπέρχονται, οἱ δὲ ὥς ἑκαστοὶ δύνανται· πολλὰ δ' ἡ Σικελία· εἰσὶ δ' οἱ καὶ αὐτοὶ ἐμπορενόμενοι ἀνδράποδα Ὑκκαρικὰ ἀντερβιβύσται ὑπὲρ σφῶν πείσαντες τοῖς τριηράρχοις τὴν ἀκρίβειαν τοῦ ναυτικοῦ ἀφίηται.

Ἐπισταμένοις δ' ὑμῖν γράφω ὅτι βραχεία ἀκμῇ πληρώματος καὶ ὀλίγοι τῶν ναυτῶν οἱ ἐξορμῶντές τε ναῦν καὶ ξιπάρχοντες τὴν εἰρεσίαν.

# UNSEEN TRANSLATION.

FRIDAY, 5th April 1901.—2 to 5 P.M.

Translate :—

1. Ὡς ἄρ' ἔφη· καὶ χερσὶν ἅμ' ἀμφοτέρησιν αἶρας,  
 ἅψ' εἴσω κίε δῶμα φέρων ἑρατεινὸν ἄθυρμα.  
 ἔνθ' ἀναπλήσας γλυφάνῳ πολιοῖο σιδήρου  
 αἰῶν' ἐξετόρησεν ὀρεσκώοιο χελώνης.  
 ὥς δ' ὁπότε ὠκὺ νόημα διὰ στέρνοιο περήσῃ  
 ἀνέρος, ὄντε θαμειαὶ ἐπιστρωφῶσι μέριμναι,  
 αἱ δέ τε δινηθῶσιν ἀπ' ὀφθαλμῶν ἀμαρυναί,  
 ὥς ἅμ' ἔπος τε καὶ ἔργον ἐμήδετο κύδιμος Ἑρμῆς.  
 πῆξέ δ' ἄρ' ἐν μέτροισι ταμῶν δόνακας καλάμοιο,  
 πειρήνας διὰ νῶτα λιθορρίνοιο χελώνης.  
 ἀμφὶ δὲ δέρμα τάνυσσε βοὸς πραπίδουσιν ἔησι,  
 καὶ πῆχεις ἐνέθηκ', ἐπὶ δὲ ζυγὸν ἤραρεν ἀμφοῖν,  
 ἑπτὰ δὲ συμφώνους οὔων ἐτανύσσατο χορδὰς.  
 αὐτὰρ ἐπειδὴ τεύξε χεροῖν ἑρατεινὸν ἄθυρμα,  
 πλήκτρῳ ἐπειρήτιζε κατὰ μέρος· ἥ δ' ὑπὸ χειρὸς  
 σμερδαλέον κονάβησε· θεὸς δ' ὑπὸ καλὸν αἶειδεν.
2. Οὐκ ἀνδριαντοποιὸς εἰμ' ὥστ', ἐλινύσοντά μ' ἐργάζεσθαι  
 ἀγάλματ' ἐπ' αὐτὰς βαθμίδος  
 ἑσταότ'· ἀλλ' ἐπὶ πάσας ὀλκώδους ἐν τ' ἀκάτῳ, γλυκεῖ' αἰοῖά,  
 στεῖχ' ἀπ' Αἰγίνας, διαγγέλλουσ', ὅτι  
 Δάμπωνος υἱὸς Πυθέας εὐρυσθενὴς  
 νίκη Νεμείοις παγκρατίου στέφανον,  
 οὐπῶ γένυσσι φαίνων τέρειναν ματέρ' οἰνάνθας ὀπώραν,  
 ἐκ δὲ Κρόνιον καὶ Ζηνὸς ἥρωας αἰχματὰς φυτευθέντας καὶ ἀπὸ  
 χρυσεῶν Νηρηΐδων



Αἰακίδας ἐγέραρεν ματρόπολιν τε, φίλαν ξένων ἄρουραν·  
 τάν ποτ' εὐανδρόν τε καὶ ναυσικλυτὰν  
 θέσαντο παρ βωμὸν πατέρος Ἑλλαίου  
 στάντες, πίτναν τ' εἰς αἰθέρα χεῖρας ἀμῶ  
 Ἐνδαΐδος ἀρίγνωτες υἱοὶ καὶ βία Φώκου κρέοντος,  
 ὁ τᾶς θεοῦ, ὃν Ψαμάθεια τίκτ' ἐπὶ ῥηγμῖνι πόντου.  
 αἰδέομαι μέγα εἰπεῖν ἐν δίκῃ τε μὴ κεκινδυνευμένον,  
 πῶς δὴ λίπον εὐκλέα νῆσον, καὶ τίς ἄνδρας ἀλκίμους  
 δαίμων ἀπ' Οἰνῶνας ἔλασεν. στάσομαι. οὐ τοι ἅπαντα κερδίων  
 φαίνουσα πρόσωπον ἀλάθει' ἀτρεκῆς·  
 καὶ τὸ σιγᾶν πολλάκις ἐστὶ σοφώτατον ἀνθρώπῳ νοῆσαι.  
 εἰ δ' ὄλβον ἢ χειρῶν βίαν ἢ σιδαρίταν ἐπαινῆσαι πολέμον  
 δεδόκηται, μακρὰ δὴ  
 αὐτόθεν ἄλλαθ' ὑποσκάπτει τις· ἔχω γονάτων ἐλαφρὸν ὄρμηϊν·  
 καὶ πέραν πόντοιο πάλλοντ' αἰετοί.  
 πρόφρων δὲ καὶ κείνοισ' αἰεὶδ' ἐν Παλίῳ  
 Μοισᾶν ὁ κάλλιστος χορός, ἐν δὲ μέσαις  
 ὁρμήγ' Ἀπόλλων ἐπ' ἄγλωσσον χρυσέῳ πλάκτρῳ αἰώκων  
 ἀγείτο παντοίων νόμων.

3. ΞΕ. ὡὰ ταῦτ' οὖν λόγον πρῶτον καὶ δόξαν καὶ φαντασίαν  
 διερευνητέον ἢ τί ποτ' ἔστιν, ἵνα φανέντων καὶ τὴν κοινωρίαν αὐτῶν  
 τῷ μὴ ὄντι κατίδωμεν, κατιδόντες δὲ τὸ ψεῦδος ὃν ἀποδείξωμεν,  
 ἀποδείξαντες δὲ τὸν σοφιστήν εἰς αὐτὸ ἐγδῆσωμεν, εἴπερ ἕναχός ἐστιν,  
 ἢ καὶ ἀπολύσαντες ἐν ἄλλῳ γένει ζητῶμεν.

ΘΕΑΙ. Κομῶν δέ γε, ὦ ξένη, ἔοικεν ἀληθὲς εἶναι τὸ περὶ τὸν  
 σοφιστήν κατ' ἀρχὰς λεχθέν, ὅτι διασθῆρεντον εἴη τὸ γένος. φαίνεται  
 γὰρ οὖν προβλημάτων γίμειν, ὃν ἐπειδάν τι προβάλῃ, τοῦτο πρό-  
 τερον ἀναγκαῖον διαμάχεσθαι πρὶν ἐπ' αὐτὸν ἐκείνον ἀφικέσθαι.  
 εἴν γὰρ μόγις μὲν τὸ μὴ ὂν ὥς οὐκ ἔστι προβληθὲν διεπεράσαμεν,  
 ἕτερον δὲ προβέβληται, καὶ οὐκ ὀγ ψεῦδος ὥς ἔστι καὶ περὶ λόγον  
 καὶ περὶ δόξαν ἀποδείξαι, καὶ μετὰ τοῦτο ἴσως ἕτερον, καὶ ἔτ' ἄλλο  
 μετ' ἐκείνο· καὶ πέρας, ὥς ἔοικεν, οὐδὲν φανήσεται ποτε.

ΞΕ. Οαρρεῖν, ὦ Θεαίτητε, χρὴ τὸν καὶ σμικρὸν τι οὐνόμενον εἰς

τὸ πρόσθεν αἰεὶ προϊέναι. τί γὰρ ὃ γ' ἀθυμῶν ἐν τούτοις δράσειεν ἂν ἐν ἄλλοις, ἢ μηδὲν ἐν ἐκείνοις ἀνύτων ἢ καὶ πάλιν εἰς τοῦπισθεν ἀπωσθείς; σχολῇ που, τὸ κατὰ τὴν παροιμίαν λεγόμενον, ὃ γε τοιοῦτος ἂν ποτε ἔλοι πόλιν. νῦν δ' ἐπεὶ, ὦ γαθέ, τοῦτο ὃ λέγεις διαπεπέρανται, τό τοι μέγιστον ἡμῖν τεῖχος ἡρημένον ἂν εἴη, τὰ δ' ἄλλα ἤδη ῥάω καὶ σμικρότερα.

4. ἔστι δὲ γνώμη ἀπόφανσις, οὐ μέντοι περὶ τῶν καθ' ἕκαστον οἶον ποῖός τις Ἰφικράτης, ἀλλὰ καθόλου· οὔτε περὶ πάντων καθόλου, οἶον ὅτι τὸ εὐθὺ τῷ καμπύλῳ ἐναντίον· ἀλλὰ περὶ ὅσων αἱ πράξεις εἰσὶ, καὶ αἰρετὰ ἢ φευκτά ἔστι πρὸς τὸ πράσσειν. ὥστ' ἐπεὶ τὰ ἐνθυμήματα ὃ περὶ τοιούτων συλλογισμὸς ἔστι, σχεδὸν τά τε συμπεράσματα τῶν ἐνθυμημάτων καὶ αἱ ἀρχαί, ἀφαιρεθέντος τοῦ συλλογισμοῦ, γινώμαί εἰσιν. οἶον,

χρὴ δ' οὐ ποθ', ὅστις ἀρτίφρων πέφυκ' ἀνὴρ,  
παῖδας περισσῶς ἐκδιδάσκεσθαι σοφούς.

τοῦτο μὲν οὖν γνώμη· προστεθείσης δὲ τῆς αἰτίας καὶ τοῦ διὰ τί ἐνθύμημα ἔσται τὸ ἅπαν· οἶον

χωρὶς γὰρ ἄλλης ἢς ἔχουσιν ἀργίας,  
φθόνον πρὸς ἀστῶν ἀλφάνουσι δυσμενῇ.

καὶ το,

οὐκ ἔστιν ὅστις πάντ' ἀνὴρ εὐδαιμονεῖ·

καὶ τὸ,

οὐκ ἔστιν ἀνδρῶν ὅστις ἔστ' ἐλεύθερος·

γνώμη· πρὸς δὲ τῷ ἐχομένῳ ἐνθύμημα·

ἢ χρημάτων γὰρ δοῦλός ἐστιν ἢ τύχης.

εἰ δὲ ἔστι γνώμη τὸ εἰρημένον, ἀνάγκη τέτταρα εἶναι γνώμης εἶδη· ἢ γὰρ μετ' ἐπιλόγου ἔσται, ἢ ἄνευ ἐπιλόγου. Ἀποδείξεως μὲν οὖν δεόμεναί εἰσιν, ὅσαι παράδοξόν τι λέγουσιν, ἢ ἀμφισβητούμενον· οὐαὶ δὲ μηδὲν παράδοξον, ἄνευ ἐπιλόγου. τούτων δ' ἀνάγκη τὰς μὲν διὰ τὸ προεγινῶσθαι μηδὲν δεῖσθαι ἐπιλόγου· οἶον,

ἀνδρὶ δ' ὑγιαίνειν ἄριστόν ἐστιν, ὥς γ' ἡμῖν δοκεῖ· φαίνεται μὲν γὰρ τοῖς πολλοῖς οὕτω· τὰς δ' ἅμα λεγομένης δόξης εἶναι ἐπιβλέψασιν· οἶον,

οὐδεὶς ἐραστὴς ὅστις οὐκ αἰεὶ φιλεῖ.

τῶν δὲ μετ' ἐπιλόγον· αἱ μὲν ἐνθυμήματος μέρος εἰσὶν· ὥσπερ  
 χρὴ δ' οὐ ποθ' ὅστις ἀρτίφρων·  
 αἱ δ' ἐνθυμηματικά· μὲν, οὐκ ἐνθυμήματος δὲ μέρος· αἵπερ καὶ  
 μάλιστα εὐδοκιμοῦσιν. Εἰσὶ δ' αἶται, ἐν ὅσαις ἐμφαίνεται τοῦ  
 λεγομένου τὸ αἶτιον· οἷον ἐν τῷδε,  
 Ἀθάνατον ὀργὴν μὴ φύλαττε θνητὸς ὢν.  
 τὸ μὲν γὰρ φᾶναι μὴ δεῖν· ἀεὶ φυλάττειν τὴν ὀργὴν, γνώμη· τὸ δὲ  
 προσκείμενον, θνητὸν ὄντα, τὸ διὰ τί λέγει.

SATURDAY, 6th April 1901.—9 to 12 o'clock.

For Greek Prose :

At length, in this final phase, we have some chance of seeing something of the man. The artifice and drapery still encompass him, but not always; and through the perplexed and adulatory narratives there come glimpses of light. From one there even comes illumination. Had Gourgaud remained till the end, it is scarcely too much to say that we should have known from him more of the naked Napoleon than from all the existing library of Napoleonic literature. But Gourgaud leaves before we most require him. The remaining records tell us little or nothing of that period when there may have been in all probability most to be learned; at that supreme opportunity for self-revelation when the vanities and passions of life were paling before the infinite shadow of death. It was then that, left alone with history and with eternity, the *man*, as apart from the warrior and statesman, might, possibly but not probably, have revealed himself, and confessed himself, and spoken what truth was in him. Indeed, the declaration about the Duc d'Enghien's death, made five weeks before his own, shows that the dying man did assert himself with passionate impatience to clear others and to tell the truth.

But even without the last revelations, which he may have

made, but which we have not got, it is to St. Helena that the world must look for the final glimpse of this great human problem. For a problem he is and must ever remain. Mankind will always delight to scrutinise something that indefinitely raises its conception of its own powers and possibilities. For this reason it loves balloons and flying machines, apparatus that moves below earth or sea, the men who accomplish physical or intellectual feats which enlarge the scope of human achievement. For this reason also it seeks, but eternally in vain, to penetrate the secret of this prodigious human being.

ROSEBERY.

### OPTIONAL SUBJECTS.

#### COMPARATIVE PHILOLOGY.

TUESDAY, 2nd April 1901.—2 to 5 P.M.

[EIGHT of the following Questions to be answered.]

1. What different schemes have been proposed for classifying languages ?
2. Give some account of the subdivisions of Keltic and Teutonic speech.
3. Review the different theories as to the affinities of Etruscan.
4. Discuss the relations between race and language ; supporting your views by concrete examples.
5. Illustrate the importance of Analogy as a factor of linguistic change.
6. Show by examples what you understand by "dynamic change."
7. Discuss the dialectic features of the Homeric poems.
8. State what you know regarding the Eugubine tables, and their linguistic value.

9. Discuss the modifications which diphthongs underwent in Greek and Latin.

10. Discuss the formation of the passive voice in Greek and Latin.

11. Explain the formation of *twelve* of these words, giving cognates where you can:—δέσποινα, *era*, εἶναι, φέρομαι, *vidissem*, σχές, *hibernus*, οἶρε, *nidus*, ἔφη, *scripsisti*, ἦδεα, *dictu*, ἔκταμεν, *viderunt*, εἶς, *qui*, *fac*.

12. Give cognates, and, if possible, the etymology of *twelve* of the following words, noting any irregularities of formation that may occur to you:—γλῆκός, *arctus*, ἔθνη, *rapor*, τλητός, *lien*, ἀνεί, *cornu*, ἐλάσσων, *arduus*, ὄλος, *humerus*, οἶομαι, *ruber*, πείθω, *prehendo*, φόνος, *coquit*.

## ANCIENT PHILOSOPHY.

### EARLIER PERIOD.

TUESDAY, 2nd April 1901.—9 to 12 o'clock.

1. To what extent is a *teleological* explanation of Nature to be found in Plato and preceding Greek philosophers?

2. Discuss carefully the precise nature of the primary substance (τὸ ἄπειρον) of Anaximander.

3. Give some account of the causes that led to the trial of Socrates, and discuss the question whether he was justly condemned.

4. Explain briefly Plato's Theory of Ideas as represented in the *Phaedo* and *Republic*.

5. Translate and explain:—

(1) πηλουμένον δὲ τοῦ ἀέρος πρώτην γεγενῆσθαι λέγει τὴν γῆν πλατεῖαν μάλα· διὸ καὶ κατὰ λόγον αὐτὴν ἐποχεῖσθαι τῷ ἀέρι.

(2) Ἡράκλειτος τὴν ἀρχὴν εἶναι φησι ψυχὴν, εἶπερ τὴν ἀναθυμίασιν, ἐξ ἧς τὰλλα συνίστησιν· καὶ ἀσωματώτατόν τε καὶ ῥέον αἶνι. τὸ δὲ κινούμενον κινουμένῳ γινώσκεσθαι.

(3) χρή τὸ λέγειν τε νοεῖν τ' ἐὼν ἔμμεναι. ἔστι γὰρ εἶναι, μηδὲν δ' οὐκ εἶναι· τὰ σ' ἐγὼ φράζεσθαι ἄνωγα. πρώτης γάρ σ' ἀφ' ὁδοῦ ταύτης διζήσιος εἶργω· αὐτὰρ ἔπειτ' ἀπὸ τῆς, ἣν δὴ βροτοὶ εἰδότες οὐδὲν πλάζονται δίκρανοι.

(4) οὐδέ τι τοῦ παντὸς κενεὸν πέλει οὐδὲ περισσόν· τοῦτο δ' ἐπαυξήσεις τὸ πᾶν τί κε καὶ πόθεν ἔλθόν; πῇ δὲ καὶ ἐξαπολοῖατ', ἐπεὶ τῶνδ' οὐδὲν ἔρημον; ἀλλ' αὖτ' ἐστὶν ταῦτα, δι' ἀλλήλων δὲ θέοντα γίνεται ἄλλοθεν ἄλλα καὶ ἡνεκές, αἰὲν ὁμοῖα.

(5) ὁ μὲν γὰρ πῦρ καὶ γῆν καὶ τὰ σύστοιχα τοῦτοις στοιχεῖά φησιν εἶναι τῶν σωματίων καὶ συγκεῖσθαι πάντ' ἐκ τούτων, Ἀναξαγόρου δὲ τοῦναντίον· τὰ γὰρ ὁμοιομερῇ στοιχεῖα, ἀέρα δὲ καὶ πῦρ μίγμα τούτων καὶ τῶν ἄλλων σπερμάτων πάντων.

(6) διορίζεται μὴ μᾶλλον τὸ δὲν ἢ τὸ μηδὲν εἶναι· δὲν μὲν ὀνομάζων τὸ σῶμα, μηδὲν δὲ τὸ κενόν, ὥς καὶ τούτων φύσιν τινα καὶ ὑπόστασιν ἰδίαν ἔχοντος.

(7) καὶ σοφίαν καὶ σοφὸν αἰδρα πολλοῦ δέω τὸ μὴ φάναι εἶναι, ἀλλ' αὐτὸν τοῦτον καὶ λέγω σοφόν, ὃς ἂν τινα ἡμῶν ᾧ φαίνεται καὶ ἔστι κακόν, μεταβάλλον ποιήσῃ ἀγαθόν φαίνεσθαι τε καὶ εἶναι.

(8) Σ. οὐκοῦν τόδε γ' ἔσθ' ἡμῖν περὶ πάντα καὶ καθ' ἕκαστον, ἥτοι εἰδέναι ἢ μὴ εἰδέναι; μαρθάνειν γὰρ καὶ ἐπιλανθάνεσθαι μεταξὺ τούτων ὥς ὅντα χαίρειν λέγω ἐν τῷ παρόντι· νῦν γὰρ ἡμῖν πρὸς λόγον ἐστὶν οὐδέν. Θ. ἀλλὰ μήν, ὦ Σώκρατες, ἄλλο γ' οὐδὲν λείπεται περὶ ἕκαστον πλὴν εἰδέναι ἢ μὴ εἰδέναι.

(9) Σ. ὅρα δὴ καὶ ἐπιστήμην εἰ δυνατόν οὔτω κεκτημένον μὴ ἔχειν, ἀλλ' ὥσπερ εἴ τις ὄρνιθας ἀγρίας, περιστρεφὰς ἢ τι ἄλλο, θηρεύσας οἴκοι κατασκευασάμενος περιστρεφῶνα τρέφοι. τρόπον μὲν γὰρ ἂν ποῦ τινα φαίμεν αὐτὸν αὐτὰς ἀεὶ ἔχειν, ὅτι δὴ κέκτηται. ἦ γὰρ; Θ. ναί. Σ. τρόπον δὲ γ' ἄλλον οὐδεμίαν ἔχειν.

(10) Σ. τὸ πρῶτον εἶη ἂν τὸ τὴν αὐτοῦ διάνοιαν ἐμφανῇ ποιεῖν διὰ φωνῆς μετὰ ῥημάτων τε καὶ ὀνομάτων, ὥσπερ εἰς κάτοπτρον ἢ ὕδωρ τὴν δόξαν ἐκτυποῦμενοι· εἰς τὴν διὰ τοῦ στόματος ῥοήν.



ἢ οὐ δοκεῖ σοι τὸ τοιοῦτον λόγος εἶναι; Θ. ἔμοιγε. τὸν γοῦν αὐτὸ δρῶντα λέγειν φαμέν.

### LATER PERIOD.

TUESDAY, 2nd April 1901.—9 to 12 o'clock.

1. Give a short account of Aristotle's doctrine of the Categories, and discuss the question whether he followed any principle in arriving at them.

2. How far does Aristotle in the *Organon* anticipate modern methods of scientific research?

3. Explain the distinction between *voûs παθητικός* and *voûs ποιητικός*.

4. Give some account of Plato's conception of Matter. To what extent does he anticipate Aristotle's?

5. Translate and explain:—

(1) ἀληθεύει μὲν ὁ τὸ διηρημένον οἰόμενος διηρηθῆσθαι καὶ τὸ συγκεῖμενον συγκεῖσθαι, ἔψευσται δὲ ὁ ἐναντίως ἔχων ἢ τὰ πράγματα.

(2) ὅταν ὅροι τρεῖς οὕτως ἔχωσι πρὸς ἀλλήλους ὥστε τὸν ἔσχατον ἐν ὅλῳ εἶναι τῷ μέσῳ καὶ τὸν μέσον ἐν ὅλῳ τῷ πρώτῳ ἢ εἶναι ἢ μὴ εἶναι, ἀνάγκη τῶν ἄκρων εἶναι συλλογισμὸν τέλειον.

(3) διχῶς δ' ἀναγκαῖον προγινώσκειν· τὰ μὲν γάρ, ὅτι ἔστι, προῦπολαμβάνειν ἀναγκαῖον, τὰ δέ, τί τὸ λεγόμενόν ἐστι, ξενιέναι δεῖ, τὰ δ' ἄμφω, οἷον ὅτι μὲν ἅπαν ἢ φῆσαι ἢ ἀποφῆσαι ἀληθές, ὅτι ἔστι, τὸ δὲ τρέγωνον, ὅτι τοῦ σημναίνει, τὴν δὲ μονάδα ἄμφω, καὶ τί σημναίνει καὶ ὅτι ἔστιν.

(4) ἀμφότεροι (οἳ τε διὰ συλλογισμῶν καὶ οἳ δι' ἐπαγωγῆς λόγοι) διὰ προγινωσκομένων ποιοῦνται τὴν διδασκαλίαν, οἳ μὲν λαμβάνοντες ὡς παρὰ ξενιέντων, οἳ δὲ δεικνύντες τὸ καθόλου διὰ τοῦ δηλον εἶναι τὸ καθ' ἕκαστον. ὡς δ' αὖτως καὶ οἱ ῥητορικοὶ συμπεύθουσιν· ἢ γὰρ διὰ παραδειγμάτων, ὃ ἔστιν ἐπαγωγή, ἢ δι' ἐνθυμημάτων, ὅπερ ἔστι συλλογισμός.

(5) ἀλλ' ἐπανιτέον ὅθεν ὁ λόγος. ἐλέγομεν δ' ὅτι τὰ πάθη τῆς ψυχῆς οὔτε ὡς χωριστὰ τῆς φυσικῆς ἔλξης τῶν ζώων, ἢ δὴ τοιαῦθ' ὑπάρχει, θυμὸς καὶ φόβος, καὶ οὐχ ὥσπερ γραμμὴ καὶ ἐπίπεδον.

(6) ὡς μὲν οὖν ἡ τμῆσις καὶ ἡ ὁρασις, οὕτω καὶ ἡ ἐργήγοσις ἐντελέχεια, ὡς δ' ἡ ὄψις καὶ ἡ δύναμις τοῦ ὀργάνου, ἡ ψυχὴ· τὸ δὲ σῶμα τὸ δυνάμει ὄν· ἀλλ' ὥσπερ ὀφθαλμὸς ἡ κόρη καὶ ἡ ὄψις, καὶ ἡ ψυχὴ καὶ τὸ σῶμα ζῶον.

(7) ἀμφότεροι μὲν οὖν οἱ πρῶτοι κατὰ δύναμιν ἐπιστήμονες, ἀλλ' ὁ μὲν διὰ μαθήσεως ἀλλοιωθεὶς καὶ πολλάκις ἐξ ἐναντίας μεταβαλὼν ἔξεως, ὁ δ' ἐκ τοῦ ἔχειν τὴν αἰσθησιν ἢ τὴν γραμματικὴν, μὴ ἐνεργεῖν δ' εἰς τὸ ἐνεργεῖν ἄλλον τρόπον.

(8) τὰ δ' ἀλλήλων ἴδια κατὰ συμβεβηκὸς αἰσθάνονται αἱ αἰσθήσεις, οὐχ ἡ αὐταί, ἀλλ' ἡ μία, ὅταν ἅμα γένηται ἡ αἰσθησις ἐπὶ τοῦ αὐτοῦ, οἷον χολὴν ὅτι πικρὰ καὶ ξανθή· οὐ γὰρ δὴ ἑτέρας γε τὸ εἰπεῖν ὅτι ἄμφω ἓν.

(9) Π. ἂρ' οὖν λέγεις, ὅταν τις ἐμὲ φῇ Πρώταρχον ἓνα γεγονότα φύσει πολλοὺς εἶναι πάλιν τοὺς ἐμὲ καὶ ἐναντίους ἀλλήλοις, μέγαν καὶ σμικρὸν τιθέμενος καὶ βαρὺν καὶ κοῦφον τὸν αὐτὸν καὶ ἄλλα μυρία; Σ. σὺ μὲν, ὦ Πρώταρχε, εἴρηκας τὰ δεδημευμένα τῶν θαυμαστῶν περὶ τὸ ἓν καὶ πολλά, συγκεχωρημένα δὲ ὡς ἔπος εἰπεῖν ὑπὸ πάντων ἤδη μὴ δεῖν τῶν τοιαύτων ἅπτεσθαι, παιδαριώδη καὶ ῥήδια καὶ σφόδρα τοῖς λόγοις ἐμπόδια ὑπολαμβάνόντων γίγνεσθαι.

(10) Σ. τὴν τὰγαθοῦ μοῖραν πότερον ἀνάγκη τέλεον ἢ μὴ τέλεον εἶναι; Π. πάντων δὴ πού τελεώτατον, ὦ Σώκρατες. Σ. τί δέ; ἱκανὸν τὰγαθόν; Π. πῶς γὰρ οὔ; καὶ πάντων γε εἰς τοῦτο διαφέρειν τῶν ὄντων. Σ. τότε γε μὴν, ὡς οἶμαι, περὶ αὐτοῦ ἀναγκαιότατον εἶναι λέγειν, ὡς πᾶν τὸ γιγνώσκον αὐτὸ θηρεύει καὶ ἐφίεται βουλόμενον ἐλεῖν καὶ περὶ αὐτὸ κτήσασθαι, καὶ τῶν ἄλλων οὐδὲν φροντίζει πλὴν τῶν ἀποτελουμένων ἅμα ἀγαθοῖς. Π. οὐκ ἔστι τούτοις ἀντειπεῖν.

(B)—MENTAL PHILOSOPHY.

LOGIC AND METAPHYSICS.

WEDNESDAY, 3rd April 1901.—9 A.M. to 12 NOON.

1. Discuss the truth and explain the consequences of the view that logical judgment is a comparison of concepts.
2. Discuss the nature of negation and its relation to reality.
3. Consider the question whether judgment implies an absolute standard. Discuss the possibility of finding a standard which shall really apply to knowledge and yet not be a product of positive experience, and explain what conditions such a standard must fulfil.
4. Explain and examine Mill's account of Syllogisms, and discuss the propriety of conceiving Induction as ultimately syllogistic.
5. State in detail Hume's conception of inference and examine it critically.

WEDNESDAY, 3rd April 1901.—2 to 5 P.M.

1. Examine critically the more important theories of the relation of mental to organic processes.
2. Explain in detail the various elements involved in the perception of spatial relations.
3. Give a careful psychological account of Belief.
4. State exactly the argument by which Spinoza reaches the conclusion that God is the only substance. Examine critically the relation of this argument to the conceptions of "substance," "attribute," and "God," from which he starts.
5. In the introduction to the Deduction of the Categories Kant says, "We find ourselves in a difficulty which did not present itself in the sphere of sensibility, that is to say, we

cannot discover how the subjective conditions of thought can have objective validity." Indicate more fully the nature of this difficulty. Show how its absence from the problem of sensibility is connected with Kant's theory of the distinction between thought and sense, and state Kant's solution of it.

THURSDAY, 4th April 1901.—9 to 12 NOON.

1. Give the substance of the argument in the Theaetetus against the theory that the simple elements are unknowable. Are there any traces of this theory in earlier or contemporary philosophers?

2. State carefully Aristotle's account of sense-perception and of its object. In what respect is perception *παθος*, and how does Aristotle modify this characterisation of it? Discuss Aristotle's treatment of the special senses.

3. Explain the part played in Kant's thought by the idea of a perceptive understanding.

4. "The logical principle in general, far from being merely a subjective action in our minds, is rather the very universal, which as such is also objective."

Explain the significance of Hegel's conception of Logic in relation to its three stages—abstract, dialectical, and speculative.

5. Explain and examine Lotze's account of "relation."

## MORAL PHILOSOPHY.

### FIRST PAPER.

THURSDAY, 4th April 1901.—2 to 5 P.M.

1. Consider in detail the argument by which Sidgwick arrives at his answer to the question whether Pleasure is or is not the only object of desire.

2. Examine Spencer's account of the idea of Justice.
3. Give a critical account of Green's conception of Freedom, and the arguments by which he supports it. Consider his view of the relation of "character" to the "self."
4. Discuss the views of Sidgwick and Green regarding the practical value of ethical theory, and the comparative practical value of the Utilitarian and Self-realization theories.
5. Discuss the relation of morality to religion, and the possibility of a non-metaphysical theory of Ethics.

#### SECOND PAPER.

FRIDAY, 5th April 1901.—9 A.M. to 12 NOON.

1. Explain carefully the relation of Plato's general conception of Virtue, and of his scheme of the virtues as given in the *Republic*, to the Theory of Ideas.
2. State and interpret the various elements in Aristotle's definition of Virtue. Explain particularly the significance of *ἐξῆς* and *προαίρεσις*.
3. Explain, and examine critically, the relation of Law and End in Kant's account of morality.
4. Compare Kant's account of the relation of the Speculative to the Practical Reason with the views of Plato and Aristotle as to the relation of Knowledge to Virtue.
5. Give a detailed statement of Hegel's account of Property. Consider its relation to Freedom, to Possession, and to Contract.

#### THIRD PAPER.

FRIDAY, 5th April 1901.—2 to 5 P.M.

Write an Essay on :—

"The relation of Nature to Morality."

# (C)—MATHEMATICS AND NATURAL PHILOSOPHY.

## PURE MATHEMATICS.

TUESDAY, 2nd April 1901.—9 to 12 A.M.

1. Prove by direct expansion that the value of

$$\begin{vmatrix} a_0 & a_1 & a_2 & a_3 & \dots & a_n \\ -1 & x & 0 & 0 & \dots & 0 \\ 0 & -1 & x & 0 & & 0 \\ \cdot & \cdot & \cdot & \cdot & \cdot & \cdot \\ 0 & 0 & 0 & 0 & -1 & x \end{vmatrix}$$

is  $a_0x^n + a_1x^{n-1} + a_2x^{n-2} + \dots + a_n$ .

If  $b_1, b_2, \dots, b_n$  are the roots of this function equated to zero, and  $s_m = \sum b^m$ , prove

$$\begin{vmatrix} s_\alpha & s_{\alpha+1} & \dots & s_{\alpha+n} \\ s_\beta & s_{\beta+1} & \dots & s_{\beta+n} \\ \cdot & \cdot & \cdot & \cdot \\ s_\kappa & s_{\kappa+1} & \dots & s_{\kappa+n} \end{vmatrix} = 0$$

$\alpha, \beta, \dots, \kappa$  being any  $n+1$  positive integers.

2. Prove that when two roots  $a, b$ , of an equation, and two only, are connected by the relation  $a = \phi(b)$ , where  $\phi$  is a rational function, then both may in general be found.

Show that the equation

$$x^4 + x^2 - 8x - 4 = 0$$

has only two real roots, and apply Horner's rule to find the negative root accurately to three places of decimals.

3. Find an equation for the position ratios with respect to  $A$  and  $B$  of the points in which the straight line joining the fixed points  $A, B$ , cuts a conic section  $ax^2 + by^2 + 2hxy + 2gx + 2fy + c = 0$ .

Deduce the theorem that the product of the position ratios



determined on the sides  $AB$ ,  $BC$ ,  $CA$  of a triangle  $ABC$  by their intersections with the conic is equal to unity.

Prove that a triangle, whose sides touch a conic, is such that the lines joining the vertices to the points of contact of opposite sides are concurrent.

4. Trace in one diagram the graphs of  $y = x^3 - 5x^2$ ;  $y = x^3 - x^2 - 8x - 4$ .

Determine turning points and points of inflexion. Prove that the two curves have double contact, and determine the area enclosed by the finite arcs of contact.

5. Determine an expression for the area of a closed curve whose equation in Cartesian co-ordinates is given.

Determine the amount of area cut off the circle whose equation is  $x^2 + y^2 = 5$  by a branch of the hyperbola whose equation is  $xy = 2$ .

Find the mass of an elliptic plate of semi-axes  $a$  and  $b$ , the density varying directly as the distance from the centre and also as the distances from the principal axes.

6. Find an equation for the normal at any point on the curve whose equation is  $f(x, y) = 0$ .

Normals are drawn from a point  $P$  to the curve  $y = x^3$ , and it is found that the sum of the tangents of the inclinations of the normals to the  $x$  axis is unity. Prove that  $P$  lies on a conic section, and determine its equation.

7. Find the differential coefficient of  $u/v$  with respect to  $x$  where  $u$  and  $v$  are functions of  $x$ .

From first principles differentiate  $\cot x$  with respect to  $x$ .

Differentiate with respect to  $x$ ,

$$(i) x^{x^2}, \quad (ii) \log \{ \log (x + \sqrt{x^2 + a^2}) \}.$$

8. State and prove Leibnitz's Theorem, giving the  $n^{\text{th}}$  differential coefficient of a product.

Find the co-factor of  $\cos x$  in the fifth differential coefficient of  $(\cos x + \sin x)(x^5 - x^3 + 1)$ .

9. Show how to find by differentiation  $\lim_{x \rightarrow a} f(x)/\phi(x)$ , where  $f(a)$  and  $\phi(a)$  each  $=0$ .

Find (i)  $\lim_{x \rightarrow 0} x^3 \log x$ , (ii)  $\lim_{\theta \rightarrow 0} \frac{\theta \sin \theta - \theta^2 \cos \theta}{\sin 2\theta \sin \theta (1 - \cos \theta)}$ .

10. What is meant by partial differentiation? If  $u = \cos \{2xy(x^2 - y^2)\}$

(i) verify that  $\frac{d}{dx} \left( \frac{du}{dy} \right) = \frac{d}{dy} \left( \frac{du}{dx} \right)$ , (ii) find  $x \frac{du}{dx} + y \frac{du}{dy}$ .

11. Show how to find  $\int \cos^n x dx$  where  $n$  is a positive integer.

Evaluate (i)  $\int \frac{x dx}{(x+1)^2(x-1)}$ , (ii)  $\int \frac{dx}{x + \sqrt{x^2 - 1}}$ , (iii)  $\int_0^1 (\tan^{-1} x) dx$ ,  
(iv)  $\int_0^\pi \cos 3x \sin 4x dx$ .

12. Find the square of the distance between the points  $(x_1, y_1, z_1)$ ,  $(x_2, y_2, z_2)$  referred to rectangular axes in space.

The square of the distance of a point  $P$  from the point  $(2, 1, 2)$  exceeds the square of its distance from  $(1, 2, -1)$  by 4. Find the equation of the locus of  $P$ , and state what the locus is geometrically.

WEDNESDAY, 3rd April 1901.—9 A.M. to 12 NOON.

1. State the general theorem regarding the possibility of expressing symmetric functions of any set of variables in terms of the elementary functions; and, in particular, give the laws of degree and weight for such expressions. As an example of the theory, calculate the discriminant of the cubic

$$x^3 + qx - r = 0.$$

If  $a + b + c = 0$ ,  $x + y + z = 0$ , prove that

(i)  $\Sigma b^2 c^2 \Sigma x^2 + \Sigma y^2 z^2 \Sigma a^2 = (\Sigma a^2 + \Sigma x^2) \Sigma bc \Sigma yz$ ;

(ii)  $(a^2 x + b^2 y + c^2 z)(a x^2 + b y^2 + c z^2) = (a x + b y + c z)^2 \Sigma bc \Sigma yz$ .

2. Establish a formula for expressing  $u_{n+p}$  in terms of  $u_n$  and its differences of various orders.

If  $p+q=1$ , establish the following approximate formula

$$u_{n+p} = p u_{n+1} + q u_n - \frac{1}{6} p(1-p^2) \Delta^2 u_{n+1} - \frac{1}{6} q(1-q^2) \Delta^2 u_n;$$

and find to what order of differences it is correct.

3. Investigate a geometrical construction for the tangent from a given point to a conic whose focus, directrix, and eccentricity are given.

A parabola whose latus rectum is given, touches the axes of  $x$  and  $y$ : prove that the locus of its focus is a quartic curve; and trace this locus. How is the result modified if the axes are not rectangular?

4. Trace the conic  $3x^2 - 5xy - 2y^2 + 4x - 6y + 1 = 0$ ; and find the length of its major axis.

$OCA$  is a fixed diameter of a circle;  $BCD$  a perpendicular diameter; and  $UCU'$  a movable diameter.  $OU$  and  $OV$  meet the tangent at  $A$  in  $P$  and  $Q$  ( $P$  and  $B$  being on the same side of  $OA$ ). Find an equation to the locus of the intersection of  $BQ$  and  $DP$ ; and roughly trace it in your figure.

5. If  $\theta_1, \theta_2, \dots$  be the angles which  $O_1P, O_2P, \dots$  make with any fixed direction in one plane, the points  $O_1, O_2, \dots$  being fixed, shew how to find the direction of the tangent at any point on the curve  $f(\theta_1, \theta_2, \dots) = 0$ . If the curve pass through  $O_1$ , how can the tangent at  $O_1$  be found?

$ABC$  is a triangle; and  $P$  moves so that the angles  $APC, CPB$  are equal: prove that the locus of  $P$  passes through  $A, B, C$ ; and determine the tangents at these points.

6. Define the pedal of a curve with respect to a given point: and establish some of its characteristic properties.

Shew that the equation of the pedal of a parabola with respect to its vertex may be represented by the equation  $(x-a)y^2 + x^3 = 0$ ; and trace this curve.

7. Find the conditions that  $f(x, y) = 0$  may have a double

point; and give an equation for the tangents at the double point.

Explain what is meant by saying that a curve has a double point at infinity; and give a simple illustration.

A quartic curve touches the  $x$ -axis at the origin, and passes through the point  $(1, 1)$ . The asymptotes are the  $y$ -axis, which is approached by two branches of the curve on opposite sides of the same extremity, and  $x+y+1=0$ ,  $x-y+1=0$ , which are each approached by two branches on the same side at opposite ends. Find the equation of the curve: and sketch it.

8. Find in any way a form of the remainder after  $n$  terms in Taylor's Theorem.

Expand  $\log(1+x+x^2+x^3)$  in ascending powers of  $x$ : and find a form of the remainder after  $n$  terms.

9. If  $PM$  be the tangent at any point on a curve, and  $QM$  the perpendicular subtense, prove that the radius of curvature is the limit of  $PM^2/2QM$  when  $PM=0$ .

Find an expression for the radius of curvature at the point  $(x_0, y_0)$  on the conic  $(abcfgh)(x, y, 1)^2=0$ , the axes of co-ordinates being oblique.

10. Find in a simple form equations to represent a cycloid and determine the area between one festoon of the curve and its base.

A trochoid is generated by a point whose distance from the centre of the rolling circle is half its radius: prove that the area between the trochoid, its base, and the two cuspidal tangents of the corresponding cycloid is three-fourths of the area of the cycloid.

11. Find a formula of reduction for  $\int dx x^m / \sqrt{(a+2bx+cx^2)}$ ,  $m$  being a positive integer.

Evaluate (i)  $\int dx (\sin^{-1} x)^4$ ; (ii)  $\int dx (\tan^{-1} x)^2 x^2$ .

12. Shew how to find the length of the arc of a plane curve whose equation is given (i) in oblique Cartesian co-ordinates, (ii) in polar co-ordinates.

Find the whole arc of  $x^{\frac{2}{3}} + y^{\frac{2}{3}} = a^{\frac{2}{3}}$ .

13. Shew how to differentiate a definite integral with respect to a variable contained in the integrand and also in both limits: and note any conditions that are sufficient to secure the validity of your formula.

Evaluate  $\int_0^{\infty} dx (\tan^{-1} ax)^{-1} x(1+x^2)^{-1}$ ; and deduce, or find otherwise, the value of  $\int_0^{\infty} dx \tan^{-1} ax \tan^{-1} bx/x^2$ .

14. Shew how to integrate the linear equation  $y'' + Py' + Qy = R$  when a particular integral of  $y'' + Py' + Qy = 0$  is known.

Integrate (i)  $y + y' \cot x = (y')^2 \operatorname{cosec}^2 x$ ;

(ii)  $y'' \cot x + 2y' + y(2 \tan x + \cot x) = \sin^2 2x$ .

15. Integrate the system

$$(D^3 - D^2 + 1)x + (D^3 + 2)y = 5e^{2t} + e^t,$$

$$Dx + (D^2 + D + 1)y = 5e^{2t}.$$

WEDNESDAY, 3rd April 1901.—2 to 5 P.M.

1. Give a rigorous proof of the Exponential Theorem.

Sum the series  $\sum_{n=2}^{\infty} (n^2 + 1)x^n/n!(n^2 - 1)$ .

2. Prove that if  $f(n)$  be positive for all integral values of  $n$ , and constantly decrease as  $n$  increases, then the series  $\sum f(n)$  is convergent or divergent according as  $\sum a^n f(n^a)$  is convergent or divergent,  $a$  being any positive integer not less than 2.

Discuss the convergency of the following series

(i)  $1 - \frac{1}{2} - \frac{1}{3} + \frac{1}{4} - \frac{1}{5} - \frac{1}{6} + \frac{1}{7} - \frac{1}{8} - \frac{1}{9} + \dots$

(ii)  $1^2/2^{2+p} + 2^2/3^{2+p} + 3^2/4^{2+p} + \dots$

3. Find an equation for the pair of principal axes of the conic  $(a, b, c, f, g, h)(x, y, 1)^2 = 0$ : and discuss specially the case where  $ab - h^2 = 0$ .

$PQ$  is a chord of the conic  $f(x, y, 1) = 0$  which is normal to the conic at  $P$ . The tangent at  $Q$  meets the tangent at  $P$  in  $R$ . Find the equation to the locus of  $R$ : and discuss this locus specially for the parabola  $y^2 - 2lx = 0$ .

4. The equation in trilinear co-ordinates to a pair of straight lines through the vertex  $A$  of the triangle of reference is  $Pg^2 + Qyz + Rz^2 = 0$ ; find the condition that these lines be perpendicular.

Deduce the condition that the trilinear equation

$$(a, b, c, f, g, h)(x, y, z)^2 = 0$$

may represent a rectangular hyperbola.

Find the trilinear equation to a conic circumscribing the triangle of reference whose centre coincides with the centroid of that triangle: and shew that the conic is an ellipse.

5. State the propositions by means of which the centre of curvature of the envelope of a carried curve for any movement in a plane may be determined when the body and space centres are given.

Discuss the case in which the carried curve is a straight line; and indicate, in particular, what happens when the envelope of the straight line has a cusp.

$Q$  is a point on a conchoid of the line  $PD$  for the centre  $O$ : and  $OQ$  cuts  $PD$  in  $P$ .  $I$  is the instantaneous centre of rotation corresponding to  $Q$ . Prove that, when  $Q$  is a point of inflexion on the conchoid,  $OP.OQ = 2OI^2$ ; and deduce the locus of all the points of inflexion of the conchoids of  $PD$  for the centre  $O$ .

6. Give a general method for finding the finite asymptotes of an algebraic curve: and indicate how it may fail in special cases.

Find an equation for the asymptote of the curve

$$x = 2t/(t^3 - 1), \quad y = (t^2 + 1)/(t^3 - 1).$$



7. Prove that a logarithmic infinity of the integrand or an algebraic infinity whose order is not too high does not disturb the convergence of the integral  $\int_a^b dx f(x)$ .

Evaluate (i)  $\int_0^1 dx x^{2m} \cdot (x^{2n} + 1)$  where  $m$  and  $n$  are positive integers. Prove that, if  $0 < a < 1$ , the integral

$$(ii) \int_0^1 dz \{ z^{a-1} \log z \} / (1+z)$$

is convergent; and shew that its value can be deduced from (i).

8. Establish Fourier's Integral-Theorem.

Expand  $x \sin x$  in a Fourier-cosine-series valid throughout the closed interval  $0 \leq x \leq \pi$ .

Prove that  $\pi^2 = 1 + 2(2^2 - 1) - 2(4^2 - 1) + 2(6^2 - 1) + \dots$

9. Prove that, in general, there exists a tetrad of points which is self conjugate with respect to two given quadric surfaces: and shew that these points are vertices of the four quadric cones which can be drawn through the curve of intersection of the two quadrics.

Shew that the points of trisection of all the chords of a given parallel system of an ellipsoid, lie on an ellipsoid which touches the given ellipsoid along a central section, and divides its volume into three equal parts.

10. Given the equation to a quadric surface, say

$$(a, b, c, d, f, g, h, i, j, k)(x, y, z, 1)^2 = 0$$

referred to rectangular axes: also a plane  $lx + my + nz = 0$ , which meets the planes of  $ZOX$  and  $ZOY$  in  $O\xi$ ,  $O\eta$ , find the equation referred to the oblique axes  $O\xi$ ,  $O\eta$  of the section of the quadric by the given plane.

Apply the above method to find the eccentricity of the section of the paraboloid  $z = x^2/a + y^2/b$  by the plane  $lx + my + nz - p = 0$ .

11. Find the equation to the tangent line and osculating plane at any point  $t = \alpha$  on the curve  $x = \phi(t)$ ,  $y = \psi(t)$ ,  $z = \chi(t)$ .

Prove that the curves given by

$$x=t/(a+t), y=t/(b+t), z=t/(c+t)$$

are in general cubics for fixed values of  $a, b, c$ : and that they all pass through two fixed points. Determine the tangents at these points. Prove that, if  $a, b, c$  be connected by the relation  $Aa+Bb+Cc=0$ , where  $A, B, C$  are constants, the corresponding cubic curves all lie on a cubic surface, which contains an infinite number of conic sections.

12. Find the inflexion-locus of the differential equation

$$(4x-9y+6)p^2+(6x+2y+4)p+(2x^2+2y)=0:$$

and work out by the method of approximation the form of the integrals at the origin.

The normal to a curve at  $P$  meets the  $x$ -axis in  $G$ , and the tangent meets the  $y$ -axis in  $T$ . If  $K$  be the projection of  $P$  on the  $y$ -axis, find equations for the curve which is such that  $OG=KT$ .

13. Solve the following differential equations:

$$(i) \quad x d^3 y / dx^3 - 2 d^2 y / dx^2 = x^2;$$

$$(ii) \quad dy/dx = (x^m - y)/(y^m - x).$$

14. Establish Charpit's method for integrating the differential equation  $\psi(x, y, z, p, q)=0$ .

Integrate  $z=(x+y)pq$ .

15. Find the necessary and sufficient condition that  $P\partial u/\partial x + Q\partial u/\partial y + R\partial u/\partial z = 0$  and  $P'\partial u/\partial x + Q'\partial u/\partial y + R'\partial u/\partial z = 0$ , where  $P, Q, R, P', Q', R'$  are functions of  $x, y, z$ , may have a common solution.

Prove that the two equations  $yp+(z-x)q=y$ ,  $(z-y)p+xq=x$  have a common solution; and find it.

16. Discuss the derivation of the singular solution of  $\psi(x, y, z, p, q)=0$  directly from the differential equation. In particular, shew that the equation may have a onefold of singular integral surfaces.

Find the most general form of  $P$  as a function of  $x, y, z$  so that the Pfaffian equation

$$(y^2 + z^2 + P)dx + (z^2 + x^2 + P)dy + (x^2 + y^2 + P)dz = 0$$

may admit of a onefold of integral surfaces.

THURSDAY, 4th April 1901.—9 A.M. to 12 NOON.

Write dissertations on not more than *two* of the following subjects.

1. Algebraical Equations soluble by means of quadratics.
2. The elementary theory of probability.
3. The projective properties of a conic section.
4. The turning values of functions of two or more variables.
5.  $\Gamma$ -integrals.
6. The  $p$ -discriminant locus of the differential equation  $\phi(x, y, p) = 0$ .

## NATURAL PHILOSOPHY.

### FIRST PAPER.

THURSDAY, 4th April 1901.—2 to 5 o'clock.

1. Discuss the equation of motion  $\ddot{x} + 2k\dot{x} + n^2x = \cos ft$ , pointing out the precise meaning of each term. Solve the equation, and show how the amplitude and phase of the forced vibration depend upon the relative values of  $f, n$ , and  $k$ .

2. Show that the most general motion of a rigid body consists of a screw motion about a definite axis of screw. Show how to determine the position of this axis in any given case.

Let the body be subject to three equal angular speeds about three non-coplanar edges of a cube no two of which meet; find the axis and the pitch of the screw.

3. A thin plank is supported by two parallel cylindrical rollers which are of different diameters and may roll without

slipping upon the same horizontal plane. The centre of mass of the plank is placed a little to the lower side of the point of contact with the larger cylinder, and the plank begins to move down towards the smaller roller, rolling without slipping taking place at all the surfaces of contact. Find the acceleration of the plank, and the speed with which its centre of mass reaches the point of contact with the smaller cylinder. Take the masses of the three bodies to be the same, and the difference of the diameters of the cylinders to be  $1/n$  the length of plank between them.

4. A solid hemisphere is resting on a rough plane and an impulse is suddenly applied to a point in the rim so as to make the hemisphere roll round until the centre of mass is vertically over the part of the rim on which the hemisphere is momentarily poised. Find the least value of the impulse which can effect this.

5. Define the potential, and show that it satisfies the equation  $\nabla^2 V = -4\pi\rho$  where  $\rho$  is the density of the matter at the point for which  $V$  is the potential.

By direct application of this equation find the value of  $V$  in the three regions of space formed by two concentric charged spheres of potentials  $A$  and  $B$ , and radii  $a$  and  $b$ . Find also the capacity of the system.

6. Discuss the motion of a particle projected inside a smooth paraboloid of revolution with vertex down and axis vertical, the particle being projected at the level of the focus in a horizontal direction with a given speed  $V$ . Find an expression for the pressure on the surface at any moment, in terms of the weight of the particle.

7. Deduce analytical expressions for the First and Second Laws of Thermodynamics, and apply them to prove that water is heated or cooled by increase of pressure according as it is above or below the temperature of maximum density.

8. An endless uniform string of length  $2l$  is hung over two small smooth pegs at the same level and distant  $2a$  apart. Find the positions of equilibrium, and show that one of these is a position of instability.

9. Investigate the transverse vibrations of a stretched string, and find expressions for the kinetic and potential energies in terms of the initial displacements and velocities.

Work out the Fourier series for the case in which the string is initially at rest in the form  $y = x(l-x)(\frac{1}{2}l-x) a^2$ , where  $l$  is the length of the string and  $a$  a constant.

10. Show that, in motion under conservative forces, the action is stationary. Apply the principle of stationary action to determine the path of a particle subject to a central attraction proportional to the distance.

11. A solid cylinder rolls under gravity inside a hollow cylinder which is supported by a horizontal plane, all the surfaces being rough. Form the equations of motion, and investigate the small oscillations of the system.

12. An elastic cord, uniform when unstretched, has its length doubled under the influence of its own weight when suspended by one end. Find the form of the cord on the assumption of no change of volume. Find also the value of Young's Modulus.

FRIDAY, 5th April 1901.—9 A.M. to 12 NOON.

1. Find the accelerations of a point in the directions of the tangent and normal to its path.

A bead of mass  $m$  is threaded on a string of length  $l$  with its ends fastened to two points  $a$  apart. It is placed in the production of the straight line joining the fixed points with the string taut, and is started with velocity  $u$  in a direction per-

pendicular to this line. Find the pull of the string initially and at any point of the path.

2. Define moment of inertia, and find it for a solid ellipsoid.

An ellipsoid of revolution, with its unequal axis vertical, is supported by means of two vertical equal strings of given length attached symmetrically to the ellipsoid. Find the period of small oscillations round the vertical.

3. Find Lagrange's equations of motion for a conservative system, in terms of the kinetic and potential energies.

A hollow ring of mass  $M$  and radius  $a$  contains a small particle of mass  $m$ . If the ring roll in a vertical plane along a perfectly rough horizontal plane, find the motion.

4. A mass  $M$  is thrown vertically up from the ground with velocity  $u$ . It has attached to it a uniform chain of length  $l$  and mass  $ml$ . Find the velocity in any position until the whole is again on the ground.

5. Prove that if three forces keep a rigid body in equilibrium they must all be on one plane, and either meet in a point or be parallel.

$AB$ ,  $BC$ ,  $CD$ ,  $DA$ , and  $BD$  are five light rods of length  $a$ , forming a smoothly jointed rhombus and its diagonal. It is placed symmetrically, with its plane vertical, on two parallel horizontal rails which are at the same height and distant  $c$  ( $< a$ ) apart. A weight is hung from the highest point  $A$ , find the force along  $BD$ .

6. A wedge of mass  $M$  is moving with velocity  $u$  on a horizontal plane with its sloping face in front. A sphere of mass  $m$  falls from a height  $h$  upon the sloping face and brings the wedge to rest. Find  $h$  when the coefficient of restitution between the sphere and the wedge is  $e$  and the slope is  $45^\circ$ .

7. A vessel containing liquid is rotating steadily about a vertical axis. Find the equations of the surfaces of equal pressure.



A narrow tube, open at the upper end, makes an angle  $\alpha$  with the vertical and rotates with angular speed  $\omega$  about the vertical through the lower end. How much of the tube may contain liquid?

8. Prove that a line of force in an electro-static field cannot form a closed curve, nor begin and end on the same conductor. Show that at a point through which two lines of force pass the force must be zero.

Find the potential at any point due to a sphere of radius  $a$  having a charge  $e$  and a point distant  $b$  ( $> a$ ) from its centre also having a charge  $e$ .

9. Show how to form the equations of rotation of a rigid body with one point fixed, the axes being the principal axes of the body.

Integrate them in the case of a solid with two equal smaller moments of inertia.

10. Find the path of a particle projected in a given direction with a given speed and attracted by a force varying as the distance from the centre of attraction.

If a particle be attracted by three centres of equal strength forming a triangle, find the nature of the path, the law being the direct distance.

11. A condenser of capacity  $C$  has its plates connected by a wire of resistance of  $R$  and self-inductance  $L$ . Find the equation for the discharge and interpret it. When will the discharge be oscillatory?

12. Find the differential equation for the conduction of heat in an irregularly heated sphere.

Solve for the case of a spherical shell, of which the surfaces have a radii  $r_1$  and  $r_2$  and are at constant uniform temperatures  $t_1$  and  $t_2$ , if the conductivity varies as the fourth power of the radius.

FRIDAY, 5th April 1901.—2 to 5 P.M.

*Keep the Answers to I—6 and VII.—XII. in separate books.*

1. Discuss the motion of a top spinning under gravity with one point of the axis fixed.

2. State what is meant by the terms (i) coefficient of capacity, (ii) coefficient of induction, and (iii) coefficient of potential in electrostatics. Show how they are related to one another, and that the third is always positive.

Find them (i) for two concentric spheres, (ii) for two spheres which are at a distance apart great compared with their radii.

3. If unit charge of electricity be placed at distances  $h$  and  $k$  from two infinite perpendicular conducting planes, find (by images or otherwise) the potential at any point, and the whole charge on each plane.

4. If the velocity of a liquid be given at every point, find the condition that a velocity-potential exist.

Given that it exists, find it for an infinite mass of liquid in which a sphere is moving steadily with velocities  $a, b, c$  along the co-ordinate axes.

5. If a substance satisfies the equation  $p = a + \beta \sqrt{t} + \delta v$ , find the difference between the specific heats at constant pressure and at constant volume.

If a possible value of the latter specific heat be given, find, as far you can, the expression for the energy of the substance in terms of the volume and either the entropy or the temperature.

6. Find the speed of long waves in a uniform infinitely long canal.

VII. A sphere, initially at uniform temperature, is placed in a finite mass of liquid of originally different temperature which is kept well stirred. Find an expression for the subsequent temperature at any point of the sphere, and show how the constants may be evaluated.

**VIII.** Two similar and equal chains are attached one to each of the pans of a balance and their lower ends just touch a horizontal table. The centre of gravity of the balance is then coincident with the axis of rotation. Find the period of small oscillations.

**IX.** In the preceding question, investigate an expression for the pressure upon the table at any instant.

**X.** An endless circular cylinder moves through an infinite mass of liquid in a fixed direction perpendicular to its axis. Determine the stream lines and equipotential lines.

Modify your results so as to apply to the case of a fixed cylinder with the liquid flowing past it.

**XI.** In the preceding problem determine the energy of the system per unit length of the moving cylinder at any instant, and find the effective inertia. Find also the pressure on the cylinder, and show that it vanishes when the motion is steady.

**XII.** A hollow cylinder is subjected to external hydrostatic pressure. Investigate the strains at a point in the material remote from the ends.

## (F)—ENGLISH (LANGUAGE, LITERATURE, AND BRITISH HISTORY).

### ENGLISH.

#### FIRST PAPER.

MONDAY, 1st April 1901.—9 A.M. to 12 NOON.

[Not more than EIGHT Questions should be attempted.]

1. What is the effect on the feelings of reading or beholding the play of *Antony and Cleopatra*? Discuss and interpret Aristotle's definition of the emotional function of tragedy, in the light of your answer.

2. How does Aristotle explain and illustrate the Unity of Action? How far is his canon applicable to Shakespeare and Shakespeare's precursors?

3. Compare Longinus's and Danœ's canons of grandeur in style.

4. Give some account of the Latin conception of Rhetoric as exemplified in Quintilian.

5. Describe the struggle between blank verse and heroic rhyme in the reign of Charles II., and the controversies upon the subject at the time.

6. The psychology of metre, as set forth by Wordsworth and by Coleridge.

7. Classify the main forms and styles of sixteenth century English prose.

8. Contrast the treatment of the same metre in *The House of Fame*, Marvell's *Thoughts in a Garden*, *L'Allegro*, *Hudibras*, Clough's *New Decalogue*.

9. Where can we trace the literary influence of Dryden as distinct from that of Pope?

10. What are the main periods of English satire, and their characteristics?

11. What did Chaucer do for the technique of our poetry?

12. Discuss, and account as far as possible for, the decay of the literary drama in England during the eighteenth and nineteenth centuries.

#### SECOND PAPER.

MONDAY, 1st April 1901.—2 to 5 P.M.

Write an Essay on *one* of the following subjects:—

1. Dr. Johnson as a literary critic.

2. The Ethical ideals of Sidney and Spenser.

3. The probable effects of an English Academy of Letters.
4. The Elizabethan Pamphlet-Novel and the Italian *Novella*.

THIRD PAPER.

TUESDAY, 2nd April 1901.—9 A.M. to 12 NOON.

[Not more than EIGHT Questions should be attempted.]

1. Give Ascham's main educational views, with a note on his prose.

2. Comment on the use of antitheta, of triplets, of quotations, and of classical instances in Bacon's *Essays*. How far is each element beneficial to the style?

Or,

Collect from the *Essays*, or elsewhere, Bacon's views on the ideal English constitution, on religious toleration, and on friendship.

3. Show the technical advance of blank verse through the following series: *Gorboduc*, *The Steel Glass*, *Tamburlaine*, *Antony and Cleopatra*. Give brief illustrations.

4. Give the argument of the *Induction*. What suggestions may Sackville owe to other poets?

5. What are the merits of the *Shepherd's Kalendar*? Is its interest mainly historic?

6. Annotate—

(a) "One grace, one wonder at the least,  
Which into words no virtue can digest."

(b) "One by his vew  
Mote deeme him borne with ill disposed skyes,  
When oblique Saturn sate in th' house of agonyes."

(c) "Like to an almond-tree ymounted hye  
On top of greene Selinis all alone."

(d) "When thy great mother Venus first thee bare,  
Begot of Plentie and of Penurie."

(e) "You that do dictionarie's method bring  
Into your rimes, running in ratling rowes;  
You that poore Petrarch's long-deceased woes  
With new-borne sighes and denisen'd wit do sing;  
You take wrong ways."

(f) "No louely Paris made thy Hellen his."

7. Draw out the philosophical, as distinct from the theological, ideas in Spenser's *Four Hymns*.

8. Give some account of Spenser as a metrist.

9. What general view of the function of poetry was held by Elizabethan critics? Comment on that view in the light of Elizabethan poetry.

10. Quote or make a sentence accurately embodying all the special features of Euphuism. Where is Euphuism to be found, besides in the works of Lyly?

11. What is the exact plan, and what is the object of attack, in *The Steel Glass*? Show, if it exists, the influence of Langland.

12. Discuss briefly the style and versification of Montgomerie.

#### FOURTH PAPER.

TUESDAY, 2nd April 1901.—2 to 5 P.M.

[Not more than EIGHT Questions should be attempted.]

1. Describe accurately the scene, mode of acting, and typical structure, of an English Miracle Play.

2. Characterise the humour of the sacred drama in the middle ages in England. Give an instance. Does Elizabethan comedy derive from this in any sense or any degree?

3. Give an account either of *Everyman*, or of *Kynge Johan*, with a note on its place in the evolution of the drama.



4. Write brief notes on the nature and historic importance of *The Four P.'s*, *Cambyses*, *Gammer Gurton's Needle*, *Friar Bacon* and *Friar Bungay*.

5. What are the essential features of a Senecan play? Illustrate from your Set Books and elsewhere.

6. Give your estimate of *Tamburlaine*, apart from its historic significance.

7. Annotate:—

(a) "Poor soul, the centre of my sinful earth

My sinful earth these rebel powers that thee array."

(b) "Was it the proud full sail of his great verse?"

(c) "To the onlie begetter of these insuing sonnets."

(d) "To be or not to be, that is the question." Is it just to say that "the fear of immortality palsies Hamlet's will"?

8. Analyse the character *either* of Jaques *or* of Antony.

9. Give and argue succinctly your own view as to the following:—(1) The behaviour of Hamlet to Ophelia; (2) His motives for refraining from killing Claudius at prayer.

10. What, if it exists, is the "tragic fault" of Hamlet?

11. What was Shakespeare's reputation in his own day and immediately after? For what personal and poetical qualities is he specially praised?

12. What references does Shakespeare make, in his plays and poems, to the art of the actor?

#### FIFTH PAPER.

WEDNESDAY, 3rd April 1901.—9 A.M. to 12 NOON.

[At least ONE Translation Question in A and ONE Translation Question in B should be attempted, and at least ONE question in C.]

#### A.

1. Translate:—

(a) Gepenc nu, se mæra maga Healfdenes,

snottra fengel, nu ic eom siðes fus,  
 goldwine gumena, hwæt wit geo spræcon,  
 gif ic æt pearfe þinre scolde  
 aldre linnan, þæt ðu me a wære  
 forðgewitenum on fæder stæle !

Wes þu mundbora minum magoþegnum,  
 hondgesellum, gif mec hild nime !  
 swylce þu ða madmas, þe þu me sealdest,  
 Hroðgar leofa, Higelace onsend !

Mæg þonne on þæm golde ongitan Geata dryhten,  
 geseon sunu Hreðles, þonne he on þæt sinc starað,  
 þæt ic gume cystum godne funde  
 beaga bryttan, breac þonne moste.

And þu Hunferð læt ealde lafe,  
 wrætlic wægsweord, wideuðne man  
 heardecg habban ! ic me mid Hruntinge  
 dom gewyrce oþðe mec deað nimeð.

- (b) For þon ic geþencan ne mæg geond þas woruld,  
 for hwan modsefa min ne gesweorce,  
 þonne ic eorla lif eal geondþence,  
 hu hi færlice flet ofgeafon,  
 modge maguþegnas. Swa þes middangeard  
 ealra dogra gehwam dreoseð *and* fealleþ :  
 for þon ne mæg wearpan wis wer, ær he age  
 wintra dæl in woruldrice. Wita sceal gepyldig,  
 no sceal no to hatheort ne to hrædwyrde  
 ne to wæc wiga ne to wanhydig  
 ne to forht ne to fægen ne to feohgifre  
 ne næfre gielpes to georn, ær he geare cunne.

2. Describe the Old English lyrics usually classified with  
*The Wanderer*.

3. State the nature and general value of the Old English  
*Chronicle*.

4. Translate:—

And la hu mæg mare scamu purh Godes yrre mannum gelimpan ponne us deð gelome for agenum gewyrhtum? Ðeah præla hwyle hlaforde æthleape, and of cristendome to wicinge weorðe, and hit æfter þam eft geweorðe þæt wæpagewrixl weorðe gemæne pegene and præle; gyf præl þæne pegen fullice afylle, liege ægyld ealre his mægðe, and gyf se pegen þæne præl þe he ær ahte fullice afylle, gylde pegengylde. Ful earhlice laga and scandlice nydgyld purh Godes yrre us syn gemæne, understande se ðe cunne, and fela ungelimpa gelimpð pysse þeode oft and gelome. Ne dohte hit nu lange inne ne ute, ac wæs here and hete on gewelhwilcum ende oft and gelome, and Engle nu lange eall sigelease, and to swyðe geýrgde purh Godes yrre, and flotmenn swa strange purh Godes gepafunge þæt oft on gefeohte an fyseð tyne, [and twegen oft twentig], and hwilum læs, hwilum ma, eall for urum synnum.

B.

5. Translate:

- (a) Þa spræc so ofermoda cyning, þe ær wæs engla scýnost,  
 hwittost on heofnon and his Hearran leof,  
 Drihtne dyre, oð hie to dole wurdon,  
 þæt him for galscipe God sylfa wearð  
 mihtig on mode yrre, wearp hine on þæt morder innan,  
 niðer on þæt niobedd, and sceop him naman siððan,  
 cwæð þæt se hehsta hatan sceolde  
 Satan siððan, het hine þære sweartan helle  
 grundes gyman, nalles wið God winnan.  
 Satan maðelode, sorgiende spræc,  
 se þe helle forð healdan sceolde,  
 gyman þæs grundes:—wæs ær Godes engel  
 hwit on heofne, oð hine his hyge forspeon  
 and his ofermetto ealra swiðost,

*paet* he ne wolde wereda Drihtnes  
word wurðian.

- (b) Het þa bord beran, beornas gangan,  
*paet* hi on þam eastæðe ealle stodon.  
Ne mihte þær for wætere werod to þam oðrum ;  
þær com flowende flod æfter ebban,  
lucon lagustreamas ; to lang hit him puhte,  
hwænne hi togædere garas beron.  
Hi þær Pantan stream mid prasse bestodon,  
Eastseaxena ord, *and* se æschere ;  
ne mihte hyra ænig oprum derian,  
buton hwa purh flanes flyht fyl gename.  
Se flod ut gewat ; þa flotán stodon gearowe,  
wicinga fela, wiges georne.

## 6. Translate :—

(a) Fíf bec he awrat mid wundorlicum dihte. Seo forme ys *Genesis*, þe befehð þas race ærest fram frumsceafte, and be Adames synne, and hu he leofode nigan hund geara on þære forman ylde pissere worulde, and bearn gestrinde be his gebeddan Evan, and he siððan gewat mid sorge to helle. Cain wæs his sunu, se acwealde his broðor, Abel gehaten, unscyldigne mannan for his agenum andan þe he hæfde to him, and Caines ofspring, þe him of com, siððan eall wearð adrenced on þam deopan flode, þe on Noes dagum adydde eall manncinn buton þam eahta mannum ðe binnan þam arce wæron, and of þam yfelan teame ne com nan ðing sippan.

(b) Ac ða lufe mon mæg swiðe uneaðe oððe na forbeodan : wei la wei ! hwæt Orpheus ða lædde his wif mid him, oð ðe he com on *paet* gemaere leohtes ond piostro ; ða eode *paet* wif æfter him. Ða he forð on ðæt leoht com, ða beseah he hine under bæc wið ðæs wifes : ða losade hio him sona. Ðas leasan spell lærað gehwylene mon ðara ðe wilnað helle ðiostro to flionne, ond to ðæs soðan Godes lichte to cumanne, ðæt he hine ne besio to his

ealdum yflum, swa ðæt he hi eft swa fullice fullfremme swa he hi ær dyde; for ðæm swa hwa swa mid fulle willan his mod went to ðæm yflum ðe he ær forlet, ond hi ðonne fullfremeð, ond hi him ðonne fullice liciað, and he hi næfre forlatan ne penceð, ðonne forlyst he eall his ærran good, buton he hit eft gebete.

C.

7. Give a general table of the vowel differences in the Old English dialects.

8. Remark on any peculiarities of grammatical gender in Old English, and describe its disappearance from the language.

9. Give some account of the Latin element in Old English vocabulary, and of its significance.

10. Mark, with any comments, the scansion of the first *eight* lines of question 1 (*b*) above.

11. What are the most salient differences between Old and Middle English syntax?

SIXTH PAPER.

WEDNESDAY, 3rd April 1901.—2 to 5 P.M.

[At least two Questions, including Translation, should be attempted out of A, and at least two Questions out of B.]

A.

1. Translate, and indicate the dialectal forms in, the following:—

(a) þa ilomp hit in ane time;  
 þat þe king wes swiðe bliðe.  
 an ane hæze dæie;  
 imong his duzeðe monnen.  
 Hengest hine bi-pohte;  
 what he don mihte.  
 for he wolde wið þan kinge;

holden runinge .  
 þan kinge he eode to-foren :  
 & fæire hine gon greten .  
 þe king sone up stod :  
 & sætte hine bi him seoluen .  
 heo drunken heo dremden :  
 blisse wes among heom.

(b) þus quep Alured .  
 NE gabbe þu ne schotte .  
 ne chid þu wyf none sotte .  
 ne myd manyes cunnes tales .  
 ne chid þu wip nenne dwales .  
 Ne neuere þu ne bi-gynne .  
 to telle pine tyþinges .  
 At nones fremannes borde .  
 ne haue þu to vale worde .  
 Mid fewe worde wismon .  
 fele biluken wel con.

## 2. Translate :—

(a) Þe ȝiscare is þes feondes askebaðie, & lið euer iðen asken, & fareð abuten asken & bisiliche stureð him uorte rukelen muhele & monie ruken togedere, & bloweð perinne, & ablent him sulf: padereð & maketh perinne figures of augrim, ase þeos rikenares doð þat habbeð muchel uorto rikenen. Þis is al þes canges blisse, & te ueond bihalt al þis gomen, & lauhweð þet he to-bersteð. Wel understond euerich wis mon [& wummon] þis: þet gold & seoluer boðe, & euerich eorðlich eihte, nis buten eorðe & asken, þet ablent euerichne mon þet bloaweð in ham: þet is, þet boluweð him in ham: þuruh ham ine heorte prude: & al þet he rukeleð & gedereð togedere, & ethalt of eni þinge þet nis buten asken, more þen hit beo neod, al schal ine helle iwurðen to ham tadden and nedden, & boðe, as lsaie seið, schulen beon of wurmes his kurtel & his kuertur, þet nolde her þe neodfule ueden ne schruden.



- (b) Bot al watȝ nedleȝ her note · for neuer cowpe stynt  
 Pe roȝe raynande ryg · [&] pe raykande waweȝ,  
 Er veh bopom watȝ brurd-ful · to pe bonkes eggeȝ,  
 & vche a dale so depe · þat demmed at the brynkeȝ.  
 Pe moste mountaynes on mor · penne watȝ no more dryȝe,  
 & per-on flokked pe folke · for ferde of pe wrake.  
 Sypen pe wylde of pe wode · on pe water flette ;  
 Summe swymmed per-on · þat saue hemself trawed,  
 Summe styȝe to a stud · & stared to pe heuen,  
 Rwly wyth a loud rurd · rored for drede.

3. Annotate :—

(a) pryme; sewes; Grekes hors Synon; They speken of  
 Alocen; observances that sowneth into gentillesse.

- (b) Schaikand his sword, befoir Cupide he *come*  
 With reid visage and grislie *glowrand* ene,  
 And at his mouth ane *bullar* stude of fome,  
 Lyke to ane bair quhetting his tuskis kene,  
*Richt tuilyeour lyke, but temperance in tene* ;  
 Ane horne he blew with mony *bosteous* brag,  
 Quhilk all this world with *weir* hes maid to wag.

(Explain context, with notes on what is italicised.)

4. (a) Translate :—

For nature hath nat take his beginning  
 Of no party ne cantel of a thing,  
 But of a thing that parfit is and stable,  
 Descending so, till it be corruptable,  
 And therefore, of his wyse purveyaunce,  
 He hath so wel biset his ordinaunce,  
 That spesces of thinges and progressiouns  
 Shullen enduren by successiouns,  
 And nat eterne be, without lyë,  
 This maistowe understonde and seen at yë.

(b) Mark, and comment on, the scansion of the following, explaining the words in italics :—

The dokes cryden as *men wolde* hem *quelle* ;  
 The gees for fere flowen over the trees ;  
 Out of the hyve cam the swarm of bees ;  
 So hidous was the noyse, a ! *benedicite* !  
 Certes, he *Jakke Straw*, and his *meynee*,  
 Ne made neuer shoutes half so shrille,  
 Whan that they wolden any *Fleming* kille,  
 As thilke day was maad upon the fox.  
 Of bras they broghten *bemes*, and of box.

### B.

5. Discriminate the various phases of the influence of French upon Middle English vocabulary.

6. Give some account of the sources of the *Squieres Tale*, and of its later history.

7. What circumstances caused or favoured the rise of the East Midland dialect ?

8. What are the main differences between the rules of alliterative verse in Old and in Middle English ? Summarily compare the two kinds of verse in point of effectiveness.

9. Discuss the influence of English upon Middle Scots. Distinguish the main sources of Southern infusion.

10. Give the chief distinction between the A.S. and the A.F. Book-Hands.

Or,

When and how did the Caroline Minuscule influence the English Book-Hand ?

## BRITISH HISTORY.

### FIRST PAPER.

THURSDAY, 4th April 1901.—9 to 12 o'clock.

N.B.—Not more than FOUR questions should be attempted in either Section.

#### SECTION I.

1. Describe the course of the main Roman roads; and also the position and importance of the chief Roman remains in Britain.

2. Show how the work of the Church furthered the consolidation of pre-Norman England.

3. Estimate the character and extent of (1) Danish influence in England, and (2) Norman influence in Scotland.

4. Examine the importance of the reign of Henry II in English history.

5. Discuss the statement that "the House of Lords may be considered to be the oldest central institution in England."

6. "In the time of Richard I the ordinary imprecation of a Norman gentleman was—"May I become an Englishman!" Indicate how the relation of the two peoples gradually changed.

7. Sketch the history of the Franco-Scottish alliance, and its influence upon Scottish development.

#### SECTION II.

8. Compare the aims and achievements of Simon de Montfort and Earl Thomas of Lancaster.

9. What is the historical value of the *Vision of Piers Plowman*, Chaucer's *Prologue*, and More's *Utopia*?

10. "Under Edward III England was successful in battles; but she was thoroughly beaten in war. The reign was a time of great territorial losses." Illustrate and explain these statements.

11. Explain the importance of the part played by the house of Beaufort in the history of the fifteenth century.

12. Is it fair to regard the accession of the house of York as a legitimist restoration?

13. "And gospel light first dawned from Bullen's eyes,"—Comment on this line of the poet Gray.

14. Trace and account for the diminution of anti-English sentiment in Scotland during the sixteenth century.

## SECOND PAPER.

THURSDAY, 4th April 1901.—2 to 5 P.M.

*N.B.*—Not more than FIVE questions to be attempted in the first, and not more than THREE in the second Section of the Paper.

### SECTION I.

1. Explain fully the influence upon the government of Scotland of the union of the Crowns in 1603.

2. What were the relations of England to the 'Thirty Years' War in the reigns of James I and Charles I?

3. How far can it be maintained that the charge of inconsistency against Strafford is not justified?

4. Indicate the positions of English and Scottish parties that produced the "Solemn League and Covenant" and "the Engagement."

5. Compare in detail the provisions of the Instrument of Government with those of the Humble Petition and Advice.

6. Give some account of Lauderdale's administration in Scotland.

7. What was "Temple's scheme of government"? Under what circumstances was it adopted, and why did it fail?

8. Give some account of the action with regard to the Union of the chief parties and personages in the Scottish Parliament.

9. Illustrate the political influence of men of letters in the reigns of William III and Anne.

10. Show the importance of the Revolution of 1688-9 in the history of Ireland.

## SECTION II.

11. "In financial and commercial legislation Walpole moved on the lines on which the greatest statesmen in that department have moved since." Illustrate this statement.

12. Trace the chief Colonial acquisitions of England in the eighteenth century, noting the date of each.

13. Burke published the "Thoughts on the Present Discontents" in 1770. Indicate the conditions which prompted its publication.

14. Examine the causes of the war which broke out between Great Britain and France in 1793.

15. What were the origin and aims of the Holy Alliance, and what were the relations of England towards it?

## (G) MODERN LANGUAGES AND LITERATURE.

### FRENCH.

#### FIRST PAPER.

WEDNESDAY, 3rd April 1901. — 9 A.M. to 12 NOON.

Translate into English, and discuss the following passage as illustrating the characteristics of Taine's style:—

(a) Nous causons avec notre hôte. Nous découvrons bien vite que son esprit et son âme ont toujours été en équilibre. Au sortir du collège, il a trouvé sa voie toute faite : il n'a point eu à se révolter contre l'Église, qui est à demi raisonnable, ni contre

la Constitution, qui est noblement libérale : la foi et la loi qu'on lui a offertes sont bonnes, utiles, morales, assez, larges pour donner abri et emploi à toutes les diversités des esprits sincères, il s'y est attaché, il les aime, il a reçu d'elles le système entier de ses idées pratiques et spéculatives, il ne flotte point, il ne doute plus, il sait ce qu'il doit croire et ce qu'il doit faire. Il n'est point entraîné par des théories, engourdi par l'inertie, arrêté par les contradictions. Ailleurs la jeunesse est comme une eau qui croupit ou s'éparpille ; il y a ici un beau canal antique qui reçoit et dirige vers un but utile et certain tout le flot de son activité et de ses passions. Il agit, travaille et gouverne. Il est marié, il a des fermiers, il est magistrat municipal, il devient homme politique. Il améliore, il régit sa paroisse, ses terres et sa famille. Il fonde des associations, il parle dans les meetings, il surveille les écoles, il rend la justice, il introduit des perfectionnements ; il use de ses lectures, de ses voyages, de ses liaisons, de sa fortune et de son rang pour conduire amicalement ses voisins et ses inférieurs vers quelque œuvre qui leur profite et qui profite au public. Il est puissant et il est respecté. Il a les plaisirs de l'amour-propre et les contentements de la conscience. Il sait qu'il a l'autorité et qu'il en use légalement pour le bien d'autrui. Et ce bon état d'esprit est entretenu par une vie saine. Sans doute son esprit est cultivé et occupé ; il est instruit, il sait plusieurs langues, il a voyagé, il est curieux de tous les renseignements précis, il est tenu au courant par ses journaux de toutes les idées et de toutes les découvertes nouvelles ; mais en même temps, il aime et pratique tous les exercices du corps. Il monte à cheval, il fait à pied de longues promenades, il chasse, il vogue en mer sur son yacht, il suit de près et par lui-même tous les détails de l'élevage et de la culture, il vit en plein air, il résiste à l'envahissement de la vie sédentaire, qui, partout ailleurs, conduit l'homme moderne aux agitations du cerveau, à l'affaiblissement des



muscles et à l'excitation des nerfs. Voilà ce monde élégant et sensé, raffiné en fait de bien-être, réglé en fait de conduite, que ses goûts de dilettante et ses principes de moraliste renferment dans une sorte d'enceinte fleurie et empêchent de regarder ailleurs.

(b) Une brume couvrait l'horizon ; maintenant  
Voici le clair midi qui surgit rayonnant ;  
Le brouillard se dissout en perles sur les branches  
Et brille, diamant, au collier des pervenches.  
Le vent souffle à travers les arbres sur les toits  
Du hameau noir cachant ses chaumes dans les bois,  
Et l'on voit tressailler, épars dans les ramées,  
Le vague arrachement des tremblantes fumées ;  
Un ruisseau court dans l'herbe entre deux hauts talus,  
Sous l'agitation des saules chevelus ;  
Un orme, un hêtre, anciens du vallon, arbres frères  
Qui se donnent la main des deux rives contraires,  
Semblent, sous le ciel bleu, dire : A la bonne foi  
L'oiseau chante son chant plein d'amour et d'effroi  
Et du frémissement des feuilles et des ailes ;  
L'étang luit sous le vol des vertes demoiselles  
Un bouge est là, montrant, dans la sauge et le thym  
Un vieux saint souriant parmi des brocs d'étain,  
Avec tant de rayons et de fleurs sur la berge,  
Que c'est peut-être un temple ou peut-être une auberge.  
Que notre bouche ait soif ou que ce soit le cœur,  
Gloire au Dieu bon qui tend la coupe au voyageur !  
Nous entrons.—Qu'avez-vous ? Des œufs frais, de l'eau fraîche  
On croit voir l'humble toit effondré d'une crèche.  
A la source du pré, qu'abrite un vert rideau,  
Une enfant blonde alla remplir sa jarre d'eau,  
Joyeuse, et soulevant son jupon de futaine.  
Pendant qu'elle plongeait sa cruche à la fontaine,

L'eau semblait admirer, gazouillant doucement,  
Cette belle petite aux yeux de firmament.

(c) Le plus grand philosophe du monde, sur une planche plus large qu'il ne faut, s'il y a au-dessous un précipice, quoique sa raison le convainque de sa sûreté, son imagination prévaudra. Plusieurs n'en sauraient soutenir la pensée sans pâlir et suer.

Qui ne sait que la vue de chats, de rats, l'écrasement d'un charbon, etc., emportent la raison hors des gonds? Le ton de voix impose aux plus sages, et change un discours et un poème de force.

L'affection ou la haine changent la justice de face; et combien un avocat bien payé par avance trouve-t-il plus juste la cause qu'il plaide! combien son geste hardi le fait-il paraître meilleur aux juges, dupés par cet apparence! Plaisante raison qu'un vent manie, et à tout sens!

Je ne veux pas rapporter tous ses effets; je rapporterais presque toutes les actions des hommes, qui ne branlent presque que par ses secousses. Car la raison a été obligée de céder, et la plus sage prend pour ses principes ceux que l'imagination des hommes a témérairement introduits en chaque lieu.

Nos magistrats ont bien connu ce mystère. Leurs robes rouges, leurs hermines, dont ils s'emmaillottent en chats fourrés, les palais où ils jugent, les fleurs de lis, tout cet appareil auguste était fort nécessaire; et si les médecins n'avaient des soutanes et des mules, et que les docteurs n'eussent des bonnets carrés et des robes trop amples de quatre parties, jamais ils n'auraient dupé le monde, qui ne peut résister à cette montre si authentique. Les seuls gens de guerre ne se sont pas déguisés de la sorte, parce qu'en effet leur part est plus essentielle: ils s'établissent par la force, les autres par grimace.

(d) Frères humains, qui après nous vivez,  
N'ayez les cœurs contre nous endurciz,  
Car si pitié de nous pœvres avez,

Dieu en aura plustost de vous merciz.  
Vous nous voyez cy attachez cinq, six :  
Quant de la chair, que trop avons nourrie,  
Elle est pièce dévorée et pourrie,  
Et nous, les os, devenons cendre et pouldre.  
De nostre mal personne ne s'en rie,  
Mais priez Dieu que tous nous vueille absouldre !  
Se vous clamons, frères, pas n'en devez  
Avoir desdaing, quoyque fusmes occis  
Par justice. Toutesfois, vous sçavez  
Que tous les hommes n'ont pas bon sens assis :  
Intercedez doncques, de cueur rassis,  
Envers le filz de la Vierge Marie,  
Que sa grace ne soit pour nous tarie,  
Nous préservant de l'infernale fouldre.  
Nous sommes mors, ame ne nous harie ;  
Mais priez Dieu que tous nous vueille absouldre !

La pluye nous a debuez et lavez,  
Et le soleil dessechez et noirciz ;  
Pies, corbeaulx, nous ont les yeux cavez,  
Et arrachez la barbe et les sourcilz.  
Jamais nul temps nous ne sommes rassiz ;  
Puis ça, puis là, comme le vent varie,  
A son plaisir sans cesser nous charie,  
Plus becquetez d'oyseaulx que dez à couldre.  
Ne soyez donc de nostre confrairie,  
Mais priez Dieu que tous nous vueille absouldre !

Prince Jesus, qui sur tous seigneurie,  
Garde qu'Enfer n'ayt de nous la maistrie :  
A luy n'ayons que faire ne que souldre !  
Hommes, icy n'usez de mocquerie,  
Mais priez Dieu que tous nous vueille absouldre !

(c) Endementiers que l'empereres Alexis fu en cèle ost, si avint une molt granz mesaventure en Constantinople; que une meslée comença de Griens et des Latins qui érent en Constantinople estagier, dont il en i avoit molt. Et ne sai quex genz, por mal, mistrent le feu en la vile; et cil feus fu si granz et si orribles que nus hom nel pot esteindre ne abaissier. Et quant ce virent li baron de l'ost qui estoient herbergié d'autre part del port, si furent molt dolent et molt en orent grant pitié, com il virent ces haltes yglises et ces palais riches fondre et abaissier, et ces granz rues marcheandes ardoir au feu, et il ne pooient plus faire. Ensi porprist li feus desus le port a travers, tres ci que parmi le plus espès de la vile et tresque en la mer d'autre part, rez a rez del mostier Sainte-Sophie. Et dura deus jorz et deus nuis; que onques ne pot estre estainz par home; et tenoit bien li frons del feu, si come il aloit ardent, demie lieue de terre. Del damage, ne de l'avoir, ne de la richesce qui la fu perdue, ne vos porroit nus conter, et des homes et des fames et des enfanz, dont il ot molt ars. Tuit li Latin qui estoient herbergié dedenz Constantinople, de quelque terre que il fussent, n'i osèrent plus demorer, ainz pristrent lor fames et lor anfanz et lor avoirs que il en porent traire del feu ne eschamper, et entrèrent en barges et vaissiaus, et passèrent le port devers les pelerins. Et ne furent mie pou, que il furent bien quinz mille, que petit que grant; et puis fu il granz mestiers as pelerins que il fussent oltre passé.

## SECOND PAPER.

THURSDAY, 4th April 1901.—2 to 5 P.M.

### I. Translate into French:—

(a) It was a foggy day, and the fog was heavy and dark. Animate London, with smarting eyes and irritated lungs, was blinking, wheezing, and choking: inanimate London was a

sooty spectre, divided in purpose between being visible and invisible, and so being wholly neither. Gaslights flared in the shops with a haggard and unblest air, as knowing themselves to be night creatures that had no business abroad under the sun ; while the sun itself, when it was for a few moments dimly indicated through circling eddies of fog, showed as if it had gone out and were collapsing flat and cold. Even in the surrounding country it was a foggy day, but there the fog was gray, whereas in London it was, at about the boundary line, dark yellow, and, a little within it, brown, and then browner, until at the heart of the City it was rusty-black. From any point of the higher ridge of land northward, it might have been discerned that the loftiest buildings made an occasional struggle to get their heads above the foggy sea, and especially that the great dome of St. Paul's seemed to die hard ; but this was not perceivable in the streets at their feet, where the whole metropolis was a heap of vapour charged with muffled sound of wheels, and enfolding a gigantic catarrh.—DICKENS.

(*b*) He is a king every inch of him, though without the trappings of a king ; presents himself in a Spartan simplicity of vesture ; no crown but an old military cocked hat, generally old, or trampled and kneaded into absolute softness, if new ; no sceptre but one like Agamemnon's, a walking-stick cut from the woods, which serves also as a riding-stick with which he hits the horse between the 'ears,' say authors ; and for royal robes a mere soldier's blue coat with red facings, coat likely to be old and sure to have a good deal of Spanish snuff on the breast of it. Rest of the apparel dim, unobtrusive in colour or cut, ending in high overknee military boots, which may be brushed (and, I hope, kept soft with an underhand suspicion of oil), but are not permitted to be blackened or varnished, Day and Martin with their sootpots forbidden to approach. The man is not of god-like physiognomy, any more than of imposing stature

or costume: close-shut mouth with thin lips, prominent jaws and nose, receding brow, by no means of Olympian height: head, however, is of long form, and has superlative gray eyes in it. Not what is called a beautiful man; nor yet, by all appearance, what is called a happy.—CARLYLE.

(c) The perfect historian is he in whose work the character and spirit of an age are exhibited in miniature. He relates no fact, he attributes no expression to his characters, which is not authenticated by sufficient testimony. But, by judicious selection, rejection, and arrangement, he gives to truth those attractions which have been usurped by fiction. In his narrative a due subordination is observed: some transactions are prominent; others retire. But the scale on which he represents them is increased or diminished, not according to the dignity of the persons concerned in them, but according to the degree in which they elucidate the condition of society and the nature of man. He shows us the court, the camp, and the senate. But he shows us also the nation. He considers no anecdote, no peculiarity of manner, no familiar saying, as too insignificant for his notice if it is not too insignificant to illustrate the operation of laws, of religion, and of education, and to mark the progress of the human mind.—MACAULAY.

II. (a) Develop the idea that the leading characteristics of French literature, as a whole, are sobriety, wit, attention to form, inventiveness, and clearness.

(b) What writers exercised the greatest influence on the movement of ideas which produced the French Revolution?



THIRD PAPER.

FRIDAY, 5th April 1901.—9 A.M. to 12 NOON.

1. Translate into English the following passages from books not prescribed :—

(a) LE VICOMTE.

Attendez ! Je vais lui lancer un de ces traits !

[*Il s'arance vers Cyrano qui l'observe, et se campant devant lui d'un air fat.*]

Vous . . . vous avez un nez . . . heu . . . un nez . . . très grand.

CYRANO (*gravement*).

Très.

LE VICOMTE (*riant*).

Ha !

CYRANO (*imperturbable*).

C'est tout ? . . .

LE VICOMTE.

Mais . . .

CYRANO.

Ah ! non ! c'est un peu court, jeune homme !

On pouvait dire . . . Oh ! Dieu ! . . . bien des choses en somme . . .

En variant le ton,—par exemple, tenez :

Agressif : “ Moi, monsieur, si j'avais un tel nez,

Il faudrait sur le champ que je me l'amputasse ! ”

Amical : “ Mais il doit tremper dans votre tasse :

Pour boire, faites-vous fabriquer un hanap ! ”

Descriptif : “ C'est un roc ! . . . c'est un pic . . . c'est un cap !

Que dis-je, c'est un cap ? . . . C'est une péninsule ! ”

Curieux : “ De quoi sert cette oblongue capsule ?

D'écritoire, monsieur, ou de boîte à ciseaux ! ”

Gracieux : “ Aimez-vous à ce point les oiseaux

Que paternellement vous vous préoccupâtes

De tendre ce perchoir à leurs petites pattes ? ”

Truculent : Ça, monsieur, lorsque vous pétunez,  
La vapeur du tabac vous sort-elle du nez  
Sans qu'un voisin ne crie au feu de cheminée ?”

Prévenant : “Gardez-vous, votre tête entraînée  
Par ce poids, de tomber en avant sur le sol !”

Tendre : “Faites-lui faire un petit parasol  
De peur que sa couleur au soleil ne se fane !”

Pédant : “L'animal seul, monsieur, qu'Aristophane  
Appelle Hippocampelephantocamélos

Dut avoir sous le front tant de chair sur tant d'os !”

Cavalier : “Quoi, l'ami, ce croc est à la mode ?

Pour pendre son chapeau c'est vraiment très commode !”

Emphatique : “Aucun vent ne peut, nez magistral !

T'enrhumer tout entier, excepté le mistral !”

Dramatique : “C'est la Mer Rouge quand il saigne !”

Admiratif : Pour un parfumeur, quelle enseigne !”

Lyrique : “Est-ce une conque, êtes-vous un triton ?”

Naïf : “Ce monument, quand le visite-t-on ?”

Respectueux : “Souffrez, monsieur, qu'on vous salue,  
C'est là ce qui s'appelle avoir pignon sur rue !”

Campagnard : “Hé, ardé ! C'est-y un nez ? Nanain !

C'est queuqu' navet géant ou ben queuqu' melon nain !”

Militaire : “Pointez contre cavalerie !”

Pratique : “Voulez-vous le mettre en loterie ?

Assurément, monsieur, ce sera le gros lot !”

Enfin parodiant Pyrame en un sanglot :

“Le voilà donc ce nez qui des traits de son maître  
A détruit l'harmonie ! Il en rougit, le traître !”

—Voilà ce qu'à peu près, mon cher, vous m'auriez dit  
Si vous aviez un peu de lettres et d'esprit :

Mais d'esprit, ô le plus lamentable des êtres,

Vous n'en eûtes jamais un atome, et de lettres

Vous n'avez que les trois qui forment le mot : Sot !

Eussiez-vous eu, d'ailleurs, l'invention qu'il faut  
 Pour pouvoir là, devant ces nobles galeries,  
 Me servir toutes ces folles plaisanteries,  
 Que vous n'en eussiez pas articulé le quart  
 De la moitié du commencement d'une, car  
 Je me les sers moi-même, avec assez de verve,  
 Mais je ne permets pas qu'un autre me les serve.

EDMOND ROSTAND.

(b) Le duc de Bourgogne trotta ainsi jusqu'aux lices de la rue Saint-Antoine. Tout le peuple criait : "Et velà un humain prince ! velà un signeur dont le monde seroit heureux de l'avoir tel ! Que benoît soit-il et tous ceux qui l'aiment ! Et que n'est tel notre roi et ainsi humain, qui ne se vête que d'une pauvre robe grise avec un méchant chapelet, et ne hait rien que joie." Ils avaient tort, le roi Louis avait ses joies aussi. Quand le comte de Charolais, messire Adolphe de Clèves, le bâtard de Bourgogne, Philippe de Crève-cœur, toute la haute seigneurie flamande et wallonne, eurent jouté et ravi la foule, un rude homme d'armes parut, que le roi payait tout exprès, sauvagement "houssé et couvert, homme et cheval, de peaux de chevreuils armés de bois," mais fièrement monté, lequel "vint rittant parmi les jouteurs . . . et ne dura rien devant lui." Le roi regardait, caché, à une fenêtre, derrière certaines dames de Paris. Il était étrange qu'il ne se montrât pas ; le tournoi se donnait justement à sa porte, tout contre les Tournelles où il résidait. Apparemment le triste hôtel s'égayait peu de ces bruits de fêtes. Le roi y vivait seul et chichement ; petit état, froide cuisine. Il avait eu la bizarrerie de s'en tenir aux quelques serviteurs qu'il amenait de Brabant ; il vivait là comme à Genappe. Au fait, il n'avait pas besoin d'établissement ; sa vie devait être un voyage, une course par tout le royaume. A peine roi, il prit l'habit de pèlerin, la cape de gros drap gris, avec les housseaux de voyage, et il ne les ôta qu'à la mort.

Campé plus que logé dans ce vaste hôtel des Tournelles, s'agitant, s'ingéniant de mille sortes, "subtiliant jour et nuit nouvelles pensées," personne ne l'eût pris pour l'héritier dans la maison de ses pères. Il avait plutôt l'air d'une âme en peine qui, à regret, hantait le vieux logis ; à regret, loin d'être un revenant, il semblait bien plutôt possédé du démon de l'avenir.

J. MICHELET.

- (c) Li reis Marsilies ont finet sun cunseill.  
 Dist à ses humes : "Seignurs, vus en ireiz ;  
 Branches d'olive en voz mains portereiz :  
 Si me direz à Carlemaigne, à l'rei,  
 Pur le soen Deu qu'il ait mercit de mei.  
 Einz ne verrat passer cest premier meis,  
 Que jo l'sivrai od mil de mes fedeilz.  
 Si recevrai la chrestiene lei,  
 Serai sis hum par amur e par feid.  
 S'il voelt ostages, il en avrat par veir. •  
 Dist Blancandrins : "Mult bon plait en avreiz."

CHANSON DE ROLAND.

2. (a) Indicate the fundamental thought of Pascal's *Pensées*.  
 (b) Show that the key to Taine's method and doctrine is to be found in his pessimism.  
 (c) Give a brief historical sketch of the French language.  
 (d) Explain and show by examples what is meant, in philology, by "doublets."  
 (e) Give the French for *to rest*, and the English for *rester*

„	„	<i>to hiss,</i>	„	„	<i>hisser</i>
„	„	<i>a verger,</i>	„	„	<i>un verger</i>
„	„	<i>to attend</i>	„	„	<i>attendre</i>
„	„	<i>to attire,</i>	„	„	<i>attirer</i>
„	„	<i>the bail,</i>	„	„	<i>le bail</i>
„	„	<i>the curate,</i>	„	„	<i>le curé</i>
„	„	<i>the vicar,</i>	„	„	<i>le vicaire</i>
„	„	<i>to hurl,</i>	„	„	<i>hurler</i>
„	„	<i>the bat,</i>	„	„	<i>le bât.</i>

# ESSAY.

## FOURTH PAPER.

SATURDAY, 6th April 1901.—10.30 A.M. to 12 NOON.

Écrivez, en français, une composition sur l'un ou l'autre des trois sujets suivants :—

1. Les influences qui se sont exercées le plus puissamment sur la littérature française au dix-neuvième siècle.
2. La presse française est à la fois plus brillante et plus corrompue, plus influente et plus pauvre que la presse anglaise.
3. La République est la meilleure forme de gouvernement dans la France contemporaine.

## GERMAN.

### FIRST PAPER.

WEDNESDAY, 3rd April 1901.—2 to 5 P.M.

I. Translate into idiomatic English (*a*) and (*b*), and (*c*) or (*d*) :—

(*a*) Wo uns ein Einblick gegönnt ist in das innere Leben jener Jahrhunderte, da begegnet uns der seltsam gebrochene Widerschein jener ungelösten Frage, jenes martervollen Zwiespalts zwischen der diesseitigen, sinnefrohen, schöpferkräftigen Weltfreude der Laienthultur und der mit jener unvereinbaren, unverföhlichen Geschlossenheit des kirchlichen Gedankensystems. Dort war energischer Naturtrieb, elementares Wachstum, sinnliches Kraftgefühl, wogelustige, erobernde Stimmung und das Raisonnement des gesunden Menschenverstandes, hier die Ehrfurcht vor einer heiligen Institution, der Respekt vor einer geistigen Erbschaft von Jahrhunderten, die Überlegenheit der intellektuellen Schulung und die disciplinarische Gewalt: Niemand wußte, wie dieser Kampf enden werde, aber das Gefühl, daß eine Katastrophe kommen werde, konnte auch im buntesten, naivsten Weltgetriebe plötzlich beäng-

stigend aus der Tiefe tauchen und des Himmels heitre Bläue wie mit schwarzen Riesenfittichen verdunkeln. Neben den humorvollsten, lebensfrohesten Schöpfungen eines kerngesunden Realismus drängen sich in der Phantasie jener Zeit die schauerlichen Totentänze, düstre apokalyptische Visionen und erschütternde Darstellungen des jüngsten Gerichts und der Höllestrafen; neben der reinen, naiven Freude der Beobachtung erscheint eine unheimliche Kraft phantastischen Träumens, ein Schwelgen in drastischen Gegenüberstellungen des Sinnlichen und des Übersinnlichen, der Weltlust und der Weltflucht, des trohigen Genusses und der erzitternden Furcht vor den letzten Dingen. Damals wurde in Deutschland der Weltschmerz geboren, jene von unendlichen aufwärtzgehenden Ahnungen emporgetragene und der Schranken ihres Vermögens zugleich verzweifelt inne werdende Wonne des Leidens, wie sie in der Faustsage und in Albrecht Dürers tiefsinniger „Melancholie“ ihren unsterblichen Ausdruck gewonnen hat.

(b) Die Litteratur der neuesten Zeit, sowohl die Dichtung als die zunächst an dieselbe angrenzenden Darstellungsformen, hat mit Vorliebe und mit Glück ein Gebiet angebaut, in welchem das Haus eine hervortretende Stelle einnimmt. Das Dorfsidyll, die Standesnovelle, der nationale Roman, die Kulturbilder aus allen Kreisen deutschen und ausländischen Lebens zeigen uns bis zu den letzten Grenzen geschichtlicher Kunde hinauf menschliche Bildung in ihrer Wirkung auf menschliches Hausen. Wir meinen zu wissen, wie unsere Ahnen in dem Obdach aus mächtigen Balken, deren Lichtöffnung mit Fellen verhängt war, in dem rohen Gemäuer, auf gebreitetem Todenteppich bei Herdfeuer und Kienfackel sich wohllich geborgen, als starke und wehrhafte Inhaber geheiligten Hausrechts fühlen konnten; wir sind nicht Fremdlinge in der Hütte des nordischen Fischers, im Hause des Gebirgsbauern und in dem Anwesen der norddeutschen Ebene; die Burgen des Mittelalters sind uns als Wohnstätte, wenn nicht anheimelnd, doch deutlich geworden;



im Bürgerhause der letzten Jahrhunderte und in seinen Schatztruhen wissen wir uns zurecht zu finden. Mit seinem Hause ist der Mensch uns vertrauter und meist auch lieber geworden. Doch sprechen wir diese Kunde nicht als Vorrecht unserer Tage an, wenn auch die Vorliebe für den genauen Abdruck aller Natur- und Kulturformen unserer Zeit ganz besonders eignet. Waren nicht schon unsere Voretern gern zu Gast in den Pfarrhäusern zu Wakefield und Seisenheim? wehte nicht wohlliches Behagen und heitere Sicherheit sie an aus dem Patrizierhause am Hirichgraben zu Frankfurt am Main, saßen sie nicht gern in dem schattigen Stübchen unter den plaudernden Gästen des Löwenwirts, und baute sich nicht deutlich und fest vor ihrer Phantasie das Haus auf, zu dessen Gründung auf väterlichem Boden Hermann die edle Heimatsflüchtige sich gewann? Ja noch weiter zurück: die Welt der Griechen, deren Kennntnis fast seit einem Jahrhundert für die Bildung unserer Jugend beglückend und bedeutend geworden ist, sie steht nicht nur vor uns in ihren Heldenkämpfen, in ihren monumentalen Bauten und Bildwerken, in ihrer Philosophie. Auch ihr Ideal treuer Hausgemeinschaft, wohlgeordneten Hausregiments, ja selbst die Gefühle sind uns vertraut, welche ihnen das Heimwesen ehrwürdig machten und den geprüften Helden aus der Fremde mit mächtigem Zuge zurückführten.

Explain briefly the allusions contained in the underlined passages.

- (c) Nicht von der Sprache will ich sprechen noch vom Licht  
Des Himmels, welches aus des Menschen Auge spricht;  
Noch will ich sprechen von der sprechenden Geberde,  
Der herrschenden, die sich weiß unterthan die Erde;  
Bezeichnen will ich dir vier kleine Menschheitszeichen,  
Lächeln und Weinen nur, Erröthen und Erblichen.  
Ein flücht'ger Sonnenblick, ein Thau aus Wolken sprühend,  
Ein leises Morgenroth anglimmend und verblühend.

Von Farben der Natur an Erd- und Himmelsflur  
 Verblieb im Angesicht des Menschen nur die Spur.  
 Die Farben selber sind der niedern Welt gewährt,  
 In seinem Angesicht sind sie zu Dufte verklärt.  
 Der Himmel selber hat ihm aufgedrückt die Zeichen,  
 Lächeln und Weinen und Erröthen und Erblichen.  
 Drum stehen diese vier nicht in des Menschen Macht;  
 Kein rechter Mensch ist, wer weint, wenn er will, und lacht.  
 Und wer nicht, weil er will, erbleicht mehr und erröthet,  
 Der hat die Menschlichkeit mit Menscheltunst getödet;  
 Der hat zerrissen selbst mit thörichtem Verrath  
 Sein adliges Diplom, ein schlechter Diplomat.  
 Heiß' er ein Weiser nun, beherrschend die Natur,  
 Sich und die Welt, er ist ein großer Affe nur;  
 Statt lächeln grinsen kann der Aff', statt weinen heulen,  
 Zeigt statt Erblichen und Erröthen farb'ge Beulen.

- (1) Allschöpfer, warum warfst du zwischen Erd' und Himmel mich  
 Und webtest dein Geheimnis unter mir und über mir  
 Und fülltest dies Gewüt mit Sehnsucht nach Allwissenheit?  
 Nur langsam soll ich fassen dich, dir folgen Schritt vor Schritt,  
 Durch alle Krümmungen des großen Weltenlabyrinths?  
 Mit einemmale möcht ich überschauen dich und mich selbst,  
 Und überheben möcht' ich mich des kargen Menschenseins.  
 Kann je genügen mir das Räthelhafte, darf ich je  
 An dich den kleinen Maßstab legen dieser Spanne Zeit?  
 Wenn ich die Sterne, Herr, dort oben, die unendlichen,  
 Nachstamme dir, nachzähle dir, nachmillione dir,  
 Wie möcht' ich schwingen mich, von Welt zu Welt hin, ewig fort,  
 Der Fiß vor mir her aufrollend großes Schleiertuch;  
 Daran befriedigend der Sinne hohen Lebensmuth,  
 Was meine Zahl nur fassen kann in leere, nicht'ge Form.  
 Wir werfen Maulwurfsblicke zwergicht in die Wissenschaft,  
 Des Allernächsten Fremdlinge, wie des Entferntesten.

Was in den Boden diese Bäume wurzelt, wer versteht's?  
 Was diese Lüfte kaum vernehmbar lispeln, wer versteht's?  
 Sie alle sagen etwas, doch sie sagen nichts zu mir,  
 Und ihre Sprache klingt dem eingeschränkten Sinne fremd.  
 Ach, so begegnet immer seltner ein Verwandtes mir,  
 Und wen'ge nur verstehn das Weben dieser tiefen Brust:  
 So hauch' ich's feurig nun in ahnungsvollen Dichterklang,  
 Doch, ach, das Wort zerstückelt, kümmerlich, Unendliches!

Quote any passages from Goethe's *Faust* that the above reminds you of.

II. Give idiomatic English equivalents of any *twenty* of the following:—

<sup>1</sup> handgemein werden—unter der Hand—vor der Hand—es ist abhanden gekommen—<sup>2</sup> wir müssen es darauf ankommen lassen—frisch von der Leber weg—aus dem Leime gehen—auf den Leim gehen—das ist aus der Luft gegriffen—<sup>10</sup> er ist sehr von sich eingenommen—sich nach der Decke strecken—einem den Daumen halten—er ist übel daran—etwas übers Knie brechen—<sup>15</sup> er nahm ihn aufs Korn—zu Kreuze kriechen—die Flinte ins Korn werfen—auf eigne Faust—er sieht ihm durch die Finger—<sup>20</sup> aus freier Hand—er schlägt aus der Art—jemand etwas in die Schuhe schieben—bei der Stange bleiben—stehenden Fußes—<sup>25</sup> das hält nicht Stich—sich aus dem Staube machen—er ist ganz darauf versessen—er redete ihm das Wort—durch die Bank—<sup>30</sup> das lasse ich mir nicht bieten.

III. Translate into modern German either the first or the second half of (a) *and* (b).

(a) En annermal kann Jochen Schmul | Ut Hanschendorp tau Stadt herin. | Oll Jochen was en Leckermul: | De Potjchon Koffe jüll dat jin! | Hei hadd so vel von Koffe hürt, | Un hadd jeindag' em nich prebirt — | Hei et des Morgens Klütersupp — | Müt steg em nu so 'n Giwvel up, | Hei wull hüt mal eins vörnem lewen | Un let sief also Koffe gewen. | De Koffe würd herinner bröcht, | Oll

Zochen jet't sich nu taurecht | Un süht sich de Geschicht irst an: | De Tass', den Läpel un de Mann, | Wotan de Dinger woll sünd nütt! | De Läpel schint em gor tau lütt, | Hei is tau lütt för sine Finger. | Un denn de beiden Tassendinger! | Na, endlich möt hei doch heran. | Hei langt sich also her de Mann | Un schenkt sich of 'ne Tass' vull in; | Un as hei dit Stück hett taurecht, | Nimmt hei den Läpel, süßt un seggt: „Ze, 't mag jo Mod' woll jeyund jin!“ | Un fängt nu langsam an tau läpeln. | Hei ett un ett, dat will nich schäpeln; | De Sak kümmt em tau tarig vör, | Un as de Wirth geht ut de Dör, | Dumm fickt hei sich so wild herüm, | Ob em of wer woll wohren künn, | Un ob hei wir woll ganz allein. „Ze, wenn ick wüßt, dat seg' mi Klein,“ | Seggt hei, „ick ded' 't, ick ded' t, der Düwel hal! | Ik nem' de Tass' un söp einmal!“

(b) In Silvesterobnd gibb da Leezeltner a Hausfest und lodut in Stodtdechantn ein und in Bezirksrichter und in Burgermoasta und in Douktan und ah in Schulmoasta, um den s n heint oba nit geht. Der nit kimbb, der hot die Kog. Er deckt sagor die Tofel na für Bier Gäst, und fünf sein eingelodn. — Hiaz wos is's? Se keman oll fünf. Däs mocht in Moasta va Neugs irr. Denkt oba: na wan s er — da Gwissi — vageßn hot und nix nochtrogg, um sa besa, wöllu mir ah neama dron denken. Drauf essus und trinkus guat — da Moasta löst sich nit spontu — wern lusti, und gach moant da Gostgeba: Schön war's, wan hiaz an Zada zan Zeitvertreib dazählad, wos er heur za Weihnachten für Gschenka hät friagg. Dazählt s an Zada: Zigarnspigla, Tschunbiacherla mit Rolenda, seidani Holzbinderla, Silbaknöpferla, Tingguzeng, Federmesserla, Zündhölzlschachterla, da Burgamoasta hot sagor an boananan Ohrwaschlaussreingla friagg, weil er awent großhöri is nan und an Zader a Schochtl vul Leezeltu — va wen, däs brauchad ma nit zjogn. — Da Moaster is still und denkt: Won is die Kog? — Bia s gegu Zwölfi geht, keman die Punnshgläser und da Gostgeba bringg zan Dazuabeißn an extrafein Leezeltu. Friichi Taler wern auflegg, silberani Messerla dazu, da Moasta

Bienemann mocht d Schochtl auf — und thuat an Schvach. — Do is s! — Boukstar sieggs do, die Graw, afn Stroh. — Aftu schloggs zwölffi.

IV. Answer ONE of the following questions:—

(a) Characterisieren Sie kurz Winckelmann, Lessing, Herder, Goethe und Schiller als Kritiker und als Prosaisien.

(b) Welche französischen und welche englischen Einflüsse haben die literarische Revolution der siebziger Jahre des achtzehnten Jahrhunderts in Deutschland vorbereitet und herbeigeführt?

V. Answer ONE of the following questions:—

(a) Vergleichen Sie die deutsche Mythologie mit der griechischen. Was wissen Sie vom Untergang des germanischen Heidentums?

(b) Welche Kulturzustände und welche geschichtlichen Ereignisse bilden den Hintergrund für das Leben und die Dichtung Walthers von der Vogelweide?

(c) Skizzieren Sie kurz den Verlauf der napoleonischen Kriege in Deutschland und bezeichnen Sie die Verdienste des Freiherrn von Stein um die Wiedererhebung Preussens.

## SECOND PAPER.

THURSDAY, 4th April 1901.—9 A.M. to 12 NOON.

1. Translate into idiomatic German:—

(a) Then also is the sea-boat wonderful on account of the greatness of the enemy that it does battle with. To lift dead weight, to overcome length of languid space, to multiply or systematise a given force; this we may see done by the bar, or beam, or wheel, without wonder. But to war with that living fury of waters, to bare its breast, moment after moment, against the unwearied enmity of ocean: the subtle, fitful, implacable smiting of the black waves, provoking each other on endlessly, all the infinite march of the Atlantic rolling on behind them to their help, and still to strike them to break into a wreath of



smoke and futile foam, and win its way against them, and keep its charge of life from them. Does any other soulless thing do as much as this?—RUSKIN.

(b) If there be a regal solitude, it is a sick-bed. How the patient lords it there; what caprices he acts without control! how kinglike he sways his pillow—tumbling and tossing, and shifting and lowering, and thumping and flattening, and moulding it, to the ever-varying requisitions of his throbbing temples!—LAMB.

(c) The Day has bent downwards. Wearied mortals are creeping home from their field labour; the village artisan eats with relish his supper of herbs or has strolled off to the village street for a sweet mouthful of air and human news. Still summer-eventide everywhere! The great Sun hangs flaming on the utmost North-west. The hill-tops rejoicing will ere long be at their ruddiest, and blush Good-night. The thrush in green dells, on long shadowed leafy spray, pours gushing his grand serenade, to the babble of brooks grown audibler; silence is stealing over the earth.—CARLYLE.

(d) Impelled by religious frenzy, they fled with adverse haste from the error which they mutually deemed most destructive of truth and salvation. On either hand they were anxious to guard, they were jealous to defend, the union and the distinction of the two natures, and to invent such forms of speech, such symbols of doctrine, as were least susceptible of doubt and ambiguity. The poverty of ideas and language tempted them to ransack art and nature for every possible comparison, and each comparison misled their fancy in the explanation of an incomparable mystery.—GIBBON.

2. Give idiomatic German equivalents of any *twenty* of the following:—

<sup>1</sup> The book was out of print—we are of good cheer—when the worst comes to the worst—he has sown his wild oats—



“I could not help it—it all comes to the same thing—he winked at it—I put this to his credit—that turns the scale—<sup>10</sup> I know him by sight—to sit upon thorns—it is a slip of the pen—he lies like truth—he was no match for me—<sup>15</sup> in the nick of time—I cannot make it out—it is a thousand pities—there’s the rub—you don’t say so!—<sup>20</sup> that serves you right—to laugh in one’s sleeve—to trouble one’s head about . . .—a truce to nonsense—to be at one’s wit’s end—<sup>25</sup> within the memory of man—from bad to worse—the very image of his mother—to turn the tables upon any one—he will turn it to account—<sup>30</sup> be that as it may.

3. Translate, *word for word*, the first *or* the second half of each of the following passages:—

(a) Jah warth, bithê is anakumbida in garda, jah sâi, managâi môtârjôs ja frawaûrhtâi qimandans mith anakumbidêdun Iêsua jah sipônjam is. jah gâumjandans Fareisaieis qêthun du thâim sipônjam is: duhwê mith môtârjam jah frawaûrhtâim matjîth sa lâisareis izwar? Ith Iêsus gahâusjands qath du im: ni thaûrbun hâilâi lêkeis, ak thâi unhâili habandans. aththan gaggâith, ganimith hwa sijâi: armahâirtitha wiljâu jah ni hunsl; niththan qam lathôn uswaûrhtans, ak frawaûrtans. thanuh atiddjêdun sipônjôs Iôhannês qithandans: duhwê weis jah Fareisaieis fastam filu, ith thâi sipônjôs theinâi ni fastand? jah qath du im Iêsus: ibâi magun sunjus brûthfâdis qâinôn und thata hweilôs thei mith im ist brûthfâths? ith atgaggand dagôs, than afnimada af im sa brûthfâths, ja than fastand. aththan ni hwashun lagjith du plata fanan tharihis ana snagan fairnjana: untê afnimith fullôn af thamma snagin, jah wairsiza gataûra waîrthith. niththan giutand wein niujata in balgins fâirnjangs, aiththâu distaûrmand balgeis, bithêh than jah wein usgutnith jah balgeis fragistnand; ak giutand wein juggata in balgins niujans, jah bajôthum gabaîrgada.

Parse the underlined words. .

(b) Tò Ulixes fone Troio eruindendo uuító des meres uuallôta, unde er fona Sicilia ferita ze Italia, dô uuarf in der uuint ûf mit sinên skeffen ze dero iselo, târ diu scôna Circe, dera summûn tohter, gesezeniu pezouaerôt lid tien selbên gesten seangta. Sô dô diu zouuerlicha hant sie ueruuehselôta in misseliche uuisâ, sum uuas kelih ebere, sum demo leuuen, sumelichêr ouh ze uuolfe uuortenêr, sô er uueinôn uuolta, stuont er hómota. Sô umbe gieng ouh taz hûs sumelichêr alsô tygris ketânêr. Unde doh ter in fôgeles uuis fliegendo Mercurius, ter in Cillenio monte Archadiae genobet uuard, ten nôthaften herezogen umbe irbarmeda lôsti fone sinero uuirtenno gifte, io doh tie ferien, die habêtôn ubel lid getrunchen. Unde suîn uuortene uuehselôtôn sie daz prôt umbe eichela unde uuâren sie gareuuo ferlorn in liden ioh in stimmo: einêr der sin stuont ze stete leidegêr des egesen des imo geskehen uuas. Já uuio heuîg taz uuas.

Mention some characteristic peculiarities of the conjugation of verbs in Gothic as compared with Old High German.

4. Translate the following:—

Philippes kûnec, die nâhe spehenden zihent dich,  
du'n sist niht dankes milte: des bedunket mich,  
wie dû dâ mite verliesest michels mêre.

Dû möhtest gerner dankes geben tûsent pfunt,  
dan drizec tûsent âne danc. dir ist niht kunt,  
wie man mit gâbe erwirbet prîs und êre.

Denk an den milten Salatîn:

der jach, daz kûneges hende dûrkel solten sîn,  
sô wurden sie erforht und ouch geminnet.

gedenke an den von Engellant,

wie tiure man den lôste durch sin' milten hant.

ein schade ist guot, der zwêne frumen gewinnet.

Comment upon: verliesest, hende, zwêne.

5. Mention the principal changes which take place in the

language in the development from Old High German through Middle High German to Modern High German.

Or,

Which are the principal dialects of the German language? According to what principle are they classified, and which of them have played a prominent part in the history of German literature?

Or,

Point out and explain the anomaly in any *ten* of the following:—der Schmerzenschrei, die Fräulein, mit Freuden, mit nichten, der Mittwoch, selbender, wir wurden, bei Müllers, sie sind ihnen selbst ein Geß, der Bediente, auf gut Glück, ich bin es satt, er hat die Tasche voller Steine, höher denn alle Vernunft, des Nachts um halber zwölf.

### THIRD PAPER.

FRIDAY, 5th April 1901.—2 to 5 P.M.

I. Translate into idiomatic English:—

(a) Daß Zeit und Ort, wie Hülfsen um den Kern immer mit gehen sollte nicht einmal erinnert werden dürfen, und doch ist hierüber eben das hellste Geßrey. Hand Shakespear den Göttergriff Eine ganze Welt der disparatesten Auftritte zu Einer Begebenheit zu erfassen; natürlich gehörte es eben zur Wahrheit seiner Begebenheiten, auch Ort und Zeit jedesmal zu idealisiren, daß sie mit zur Täuschung beitragen. Ist wohl jemand in der Welt zu einer Kleinigkeit seines Lebens Ort und Zeit gleichgültig? und sind sies insonderheit in den Dingen, wo die ganze Seele geregt, gebildet, ungebildet wird? in der Jugend, in Szenen der Leidenschaft, in allen Handlungen aufs Leben! Ist da nicht eben Ort und Zeit und Hülfe der äußern Umstände, die der ganzen Geschichte Haltung, Dauer, Existenz geben muß, und wird ein Kind, ein Jüngling, ein Verliebter, ein Mann im Felde der Thaten sich wohl Einen

Umstand des Lokals, des Wie? und Wo? und Wann? weg-  
schneiden lassen, ohne daß die ganze Vorstellung seiner Seele litte?  
Da ist nun Shakespear der größte Meister, eben weil er nur und  
immer Diener der Natur ist. Wenn er die Begebenheiten seines  
Drama dachte, im Kopf wälzte, wie wälzen sich jedesmal Dörter  
und Zeiten so mit umher! Aus Szenen und Zeitläuften aller Welt  
findet sich, wie durch ein Gezeß der Fatalität, eben die hieher, die  
dem Gefühl der Handlung, die kräftigste, die idealste ist; wo die  
sonderbarsten, kühnsten Umstände am meisten den Trug der Wahr-  
heit unterstützen, wo Zeit- und Ortwechsel, über die der Dichter  
schaltet, am lautesten rufen: „hier ist kein Dichter! ist Schöpfer!  
ist Geschichte der Welt!“

Als 3. E. der Dichter den schrecklichen Königsmord, Trauerspiel  
Macbeth genannt, als Faktum der Schöpfung in seiner Seele  
wälzte — bist du, mein lieber Leser, so blöde gewesen, nun in keiner  
Scene, Scene und Ort mit zu fühlen — wehe Shakespear, dem ver-  
welkten Blatte in deiner Hand. So hast du nichts von der Eröf-  
nung durch die Zauberinnen auf der Heide unter Blitz und Donner!  
nichts nun vom blutigen Manne mit Macbeths Thaten zur Both-  
schaft des Königes an ihn, nichts wider die Scene zu brechen, und  
den prophetischen Zaubergeist zu eröffnen, und die vorige Bothschaft  
nun mit diesem Grusse in seinem Haupt zu mischen — gefühlt!  
Nicht sein Weib mit jener Abschrift des Schicksalsbriefes in ihrem  
Schlosse wandern sehen, die hernach wie grauerlich anders wandern  
wird! Nicht mit dem stillen Könige noch zu guter Letzt die Abendluft  
so sanft gewittert, rings um das Haus, wo zwar die Schwalbe so  
sicher nistet, aber du o König — das ist im unsichtbaren Werk! —  
dich deiner Mördergrube näherst. Das Haus in unruhiger, gast-  
licher Zubereitung, und Macbeth in Zubereitung zum Morde! Die  
bereitende Nachtszene Bankos mit Fadel und Schwerdt! Der  
Dolch! der schauerliche Dolch der Vision! Glocke — kaum ist's  
geschehen und das Poehen an der Thür! — Die Entdeckung, Ver-  
sammlung — man trabe alle Dörter und Zeiten durch, wo das zu

der Absicht, in der Schöpfung, anders als da und so geschehen könnte.

(b) Wenn man sich der schönen Natur erinnert, welche die alten Griechen umgab, wenn man nachdenkt, wie vertraut dieses Volk unter seinem glücklichen Himmel mit der freien Natur leben konnte, wie sehr viel näher seine Vorstellungsart, seine Empfindungsweise, seine Sitten der einfältigen Natur lagen, und welch ein treuer Abdruck derselben seine Dichterwerke sind, so muß die Bemerkung befremden, daß man so wenige Spuren von dem sentimentalischen Interesse, mit welchem wir Neueren an Naturscenen und an Naturcharakteren hängen können, bei demselben antrifft. Der Grieche ist zwar im höchsten Grade genau, tren, umständlich in Beschreibung derselben, aber doch gerade nicht mehr und mit keinem vorzüglicheren Herzensantheil, als er es auch in Beschreibung eines Anzuges, eines Schildes, einer Rüstung, eines Hausgeräthes oder irgend eines mechanischen Productes ist. Er scheint in seiner Liebe für das Object keinen Unterschied zwischen demjenigen zu machen, was durch sich selbst, und dem, was durch die Kunst und durch den menschlichen Willen ist. Die Natur scheint mehr seinen Verstand und seine Wißbegierde, als sein moralisches Gefühl zu interessieren; er hängt nicht mit Innigkeit, mit Empfindsamkeit, mit süßer Wehmuth an derselben, wie wir Neuern. Ja, indem er sie in ihren einzelnen Erscheinungen personificiert und vergöttert und ihre Wirkungen als Handlungen freier Wesen darstellt, hebt er die ruhige Nothwendigkeit in ihr auf, durch welche sie für uns gerade so anziehend ist. Seine ungeduldige Phantasie führt ihn über sie hinweg zum Drama des menschlichen Lebens. Nur das Lebendige und Freie, nur Charaktere, Handlungen, Schicksale und Sitten befriedigen ihn, „und wenn wir in gewissen moralischen Stimmungen des Gemüths wünschen können, den Vorzug unserer Willensfreiheit, der uns so vielem Streit mit uns selbst, so vielen Unruhen und Verirrungen aussetzt, gegen die wahllose aber ruhige Nothwendigkeit des Vernunftlosen hinzugeben, so ist, gerade umge-



fehrt, die Phantasie des Griechen geschäftig, die menschliche Natur schon in der unbeseelten Welt anzufangen, und da, wo eine blinde Nothwendigkeit herrscht, dem Willen Einfluß zu geben.“

(*c*) Du stehst so still und ernst, mein ausgebälgter Geier,  
Ich bringe dir ein Lied mit meiner ernstesten Feier.

Zwar hörst du nichts davon, dir geht mein Gruß verloren;  
Doch Dichter sind gewohnt, zu singen todten Ohren.

Es lebt ja noch der Geist, der einst dir gab die Schwingen,  
Den traf der Jäger nicht, er hört mein Lied erklingen.

Und wenn kein Menschenohr auch meinem Sange lauschte,  
So hört mich doch der Geist, der mir das Herz berauschte.

Ich wollt', ich wäre jetzt in fernen Felsenklüften,  
Und du hoch über mir, still kreisend in den Lüften;

Ich ließe froh mein Aug' mit deinem Fluge schweifen,  
Und wie du niederfährst, die Beute zu ergreifen;

Wie du, athmender Blitz, zu Boden niederzückst  
Und mit dem Krallen scharf ein warmes Leben pflückst;

Wie du das volle Herz ansehest als ein Becher,  
Daß mit dem Leben trinkt der Tod aus einem Becher.

Traun! milder ist der Tod, trotz Blut und Jammerstimme,  
Wo heiße Lebenslust sich paart mit seinem Grimme,

Als wo kein Leben ist beim letzten Hauch zu sehen,  
Wo still der Tod uns dünkt ein einsames Vergehen.

Ihr Weinenden am Sarg, an seinem dichten Schleier,  
O kommt ins Felsenthal mit mir und meinem Geier!

O kommt, Unsterblichkeit will die Natur euch lehren,  
Mit diesem Blute will sie trösten eure Zähren.

Im Kreischen dieses Mars, mag's auch die Sinne stören,  
Ist für die Seele doch ein süßer Klang zu hören.



Hier findet Trost ein Mann, ward ihm ein Glück zunichte,  
Und näher tritt er hier dem Räthsel der Geschichte.

(d) Wie der Winterwandler des Abends sich sehnt

Nach einer warmen, innigen Tasse Thee,  
So sehnt sich jetzt mein Herz nach dir,  
Mein deutsches Vaterland!  
Mag immerhin dein süßer Boden bedeckt sein  
Mit Wahnsinn, Huzaren, schlechten Versen  
Und laulig dünnen Traktätchen;  
Mögen immerhin deine Bebras  
Mit Rosen sich mästen, statt mit Disteln;  
Mögen immerhin deine noblen Affen  
In müßigem Puz sich vornehm spreizen,  
Und sich besser dünken, als all das andre  
Banausisch schwerhinwandelnde Hornvieh;  
Mag immerhin deine Schneckenversammlung  
Sich für unsterblich halten,  
Weil sie so langsam dahinkriecht,  
Und mag sie täglich Stimmen jammeln,  
Ob den Klagen des Käses der Käse gehört?  
Und noch lange Zeit in Verathung ziehn,  
Wie man die ägyptischen Schafe veredle,  
Damit ihre Wolle sich bessre  
Und der Hirt sie scheren könne wie Andre,  
Ohn' Unterschied —  
Immerhin, mag Thorheit und Unrecht  
Dich ganz bedecken, o Deutschland!  
Ich sehne mich dennoch nach dir:  
Denn wenigstens bist du doch festes Land.

II. Read, but do not translate:—

Bilder der Hoffnung, täuschet mein Herz! O mäßiget, Götter,  
Diesen gewaltigen Brand, der mir den Busen durchtobt!  
Aber auch sie verlang' ich zurück, die schmerzliche Freude,

Wenn die Sorge sich kalt, gräßlich gelassen, mir naht,  
 Nicht der Erinnern Fackel, das Bellen der höllischen Hunde  
 Schreckt den Verbrecher so, in der Verzweiflung Gefild,  
 Als das gelassne Gespenst mich schreckt, das die Schöne von  
 fern mir

Zeiget: die Thüre steht wirklich des Gartens noch auf!  
 Und ein Anderer kommt! Für ihn auch fallen die Früchte!  
 Und die Feige gewährt stärkenden Honig auch ihm!  
 Lockt sie auch ihn nach der Laube? und folgt er? O, macht  
 mich, ihr Götter,

Blind, verwischt das Bild jeder Erinnerung in mir!  
 Ja, ein Mädchen ist sie! und die sich geschwinde dem Einen  
 Giebt, sie kehret sich auch schnell zu dem Andern herum.  
 Lache nicht dießmal, Zeus, der frechgebrochenen Schwüre!

Donnere schrecklicher! Triff! — Halte die Blitze zurück!  
 Sende die schwankenden Wolken mir nach! Im nächtlichen  
 Dunkel

Treffe dein leuchtender Blitz diesen unglücklichen Mast!  
 Streue die Planken umher, und gieb der tobenden Welle  
 Diese Waaren, und mich gieb den Delphinen zum Raub! —  
 Nun, ihr Musen, genug! Vergebens strebt ihr zu schildern,  
 Wie sich Jammer und Glück wechseln in liebender Brust.  
 Heilen könnet die Wunden ihr nicht, die Amor geschlagen;  
 Aber Linderung kommt einzig, ihr Guten, von euch.

Justify the introduction of "jealousy" in this instance; give Goethe's own reasons for it as against Schiller's objections; which lines or phrases of the above do you recognise as pre-eminently Goethean? quote any lines or phrases of the poem that the above may remind you of.

**III.** Answer briefly (a) or (b), (c) or (d), (e) or (f), (g) or (h); at least *two* of the answers to be given in German:—

(a) Point out any phrases or lines in the above passage from Lenau which you consider characteristic of the poet's genius.

Quote a few striking passages from his poems. Comment upon Lenau's art as exhibited in „die Haideschenke“ or „der Postillon.“

(b) To what extent are the „Nordseebilder“ distinguished in subject-matter and in form from the rest of the „Buch der Lieder“? Mention some of the more striking „Bilder,“ and quote any lines or phrases you may remember.

(c) Comment on the significance of the term „Gothic“ in the criticism of the XVIII century, and say which features of Gothic architecture impressed Goethe at Strassburg. Trace the connection between his „discovery“ of the „Münster“ and his admiration of the Shakespearean drama.

(d) Goethe said that in „Hermann und Dorothea“ he had availed himself of some of the advantages of the art of painting and sculpture. Show how far this remark applies to such poems as „Alexis und Dora“ and „Der neue Pausias.“

(e) Give some account of the functions of Hildegarde, and „der stille Mann“ in Scheffel's „Trompeter.“

(f) Comment upon Stifter's treatment of nature in „Bunte Steine,“ and give briefly the argument of the story which has impressed you most.

(g) Give the argument of Schiller's Essay: Über den Gebrauch des Chors in der Tragödie.

(h) Give the argument of Herder's Essay on *Ossian*, or of his Essay on *Shakespeare*.

#### FOURTH PAPER.

SATURDAY, 6th April 1901.—9 to 10.30 A.M.

#### ESSAY.

Die Bedeutung Herders in der deutschen Literatur- und Geistesgeschichte.

Or,

Kulturgeschichtliche Zustände in Deutschland im Zeitalter der Aufklärung.

**(I)—ECONOMIC SCIENCE.**

(i.e. Political Economy, with either (a) Moral Philosophy or  
(b) History as Supplementary Honours subjects).

**ECONOMIC SCIENCE.****FIRST PAPER.**

**FRIDAY, 29th March 1901.—9 to 12 o'clock.**

*Six questions only to be answered—THREE from each Section.*

**SECTION A.**

1. What was the normal virgate, and how are its chief peculiarities accounted for by Mr. Seebohm?
2. Describe a typical large manor of the time of Edward I.
3. Trace the principal stages in the abolition of villeinage in England.
4. Explain briefly the meaning and significance of the following terms:—long acre; ancient messuage; lammas land; linches; furlong.
5. What were the principal economic disadvantages and the causes of the decay of the Open Field System of cultivation?
6. Give an account of the two chief periods of Enclosures in England.

**SECTION B.**

1. Point out the principal points of resemblance between the typical *Roman Villa* and the mediæval manor.
2. Give some account of the origin, functions, and decay of the institution of the Staple.
3. Give illustrations of mediæval protection to native industry.
4. Give some account of:—(a) the causes of the fall in the weight of the silver penny; (b) the connection of the sovereign with the silver pound.

5. Trace the history and consider the policy of the Navigation Acts.

6. Discuss the constitution and the relations of Merchant Gilds and Craft Gilds.

7. Give an account of development of the doctrines of the Canon Law on Usury.

SECOND PAPER.

FRIDAY, 29th March 1901.—2 to 5 o'clock.

[Two Questions to be answered in each Section.]

SECTION A.

1. Examine the views of Adam Smith on taxes (*a*) on Rent and (*b*) on Wages.

2. Trace the effects of Regulated and Joint Stock Companies on the development of British Foreign Trade.

3. Give a sketch of Adam Smith's views of the purposes for which the revenue of the Commonwealth is required.

4. Give a summary of Adam Smith's views on *either* (*a*) the expense of justice, (*b*) the expense of education.

5. Discuss the economic relations of Colonies to the Mother Country, with special reference to Adam Smith's proposals.

SECTION B.

1. Give a critical account of J. S. Mill's theory of the incidence of a house-tax.

2. Compare the systems of Natural Liberty and Maximum Utility as the economic ideals of governmental action.

3. Discuss the effects of taxes upon Monopolies—noticing different cases.

4. Give some account of the methods by which the control of public expenditure is regulated in modern states.

5. "The incidence of taxation is an integral part of the theory of value."

Examine and illustrate.

### SECTION C.

1. Discuss the principles of compensation to vested interests, distinguishing different cases.

2. Give a critical account of *Quasi-Rents* and Consumers' Surpluses.

3. Explain accurately the terms: Mint Par of Exchange; Specie Points; Rise and Fall of the Exchange.

4. Discuss the effects on Foreign Trade of a depreciation of the currency of a country.

5. What are the principal advantages of Foreign Trade? Consider typical cases in which a particular country may suffer from full freedom of foreign trade.

### THIRD PAPER.

SATURDAY, 30th March 1901.—9 to 12 o'clock.

Write Essays on *two* of the following subjects, *one* from each Group—

#### GROUP A.

1. The meaning and measurement of Economic Progress, with historical illustrations.

2. The relation of Value to the Distribution of Wealth.

3. A comparison of the Uses of the Deductive and Inductive methods in economic inquiries.

#### GROUP B.

1. International Bi-Metallism.

2. The Regulation of the Issues of Bank Notes.

3. The Causes of Movements in General Prices.



## CONSTITUTIONAL HISTORY.

### FIRST PAPER.

MONDAY, 1st April 1901.—9 to 12 o'clock.

Write short historical and critical essays on *four* of the following subjects:—

1. The consolidation of the kingdom by William the Conqueror.
2. The legislation of Henry II.
3. The origin, character, and main provisions of the Great Charter.
4. The Revolution led by Simon de Montfort.
5. The policy and legislation of Edward I in State and Church.
6. The ecclesiastical measures of Edward III, their origin and their object.
7. The Good Parliament and the reforms it effected.
8. The Rebellion of the Villeins and its causes.
9. The constitutionalism of the Lancastrian Dynasty.
10. Summary of the constitutional progress of the period from 1066 to 1450.

### SECOND PAPER.

MONDAY, 1st April 1901.—2 to 5 P.M.

Write short historical and critical essays on *four* of the following subjects:—

1. The Revolution Settlement (1689-1701).
2. Survey of the legislation of William III.
3. Constitutional events in the reign of Queen Anne.
4. Walpole's administration (1721-42).

5. Wilkes's Case in all its phases, and the principles thereby established.

6. The American Rebellion, its causes, and its conclusion.

7. Origin and rise of the Cabinet System.

8. (a) The Earl of Chatham and (b) Edmund Burke.

#### THIRD PAPER.

TUESDAY, 2nd April 1901.—9 A.M. to 12 NOON.

Discuss historically and critically *four* of—

1. The Constitutions of France from 1791 to 1870, in outline.

2. The chief features of the present Constitution of France.

3. The origin and growth of the Swiss Confederation (1291-1848).

4. The present polity of Switzerland.

5. Germany, from Jena to Sedan.

6. The Constitution (a) of Prussia, or (b) of the German Empire.

7. Landmarks in the constitutional history of Hungary.

8. (a) How constitutions are framed, adopted, and amended.  
(b) Where sovereignty, legal and political, resides, with special reference to Great Britain, France, and Germany.

#### FOURTH PAPER.

TUESDAY, 2nd April 1901.—2 to 5 P.M.

[*Four Questions only to be answered.*]

1. Sketch the career of John Wycliffe.

2. Explain and discuss briefly Wycliffe's doctrines, political and religious.

3. Who were the Lollards? Sketch their history down to the reign of Henry VIII.

4. Mention and discuss the chief landmarks in the history of Bohemia from the death of Wycliffe to the birth of Luther.

5. Explain and discuss *four* of—

a. With him ther was a Ploughman, was his brother,  
That hadde i-lad of dong ful many a fether.

A trewe swynkere and a good was he,  
Lyvyng in pees and perfight charitee.

b. His walet lay byforn him in his lappe,  
Bretful of pardoun come from Rome al hoot . . . .  
And thus with feyned flaterie and japes  
He made the persoun and the people his apes.

c. Peter! quod the prest tho · I can no pardoun fynde,  
But “dowel and haue wel · and god shal haue thi sowle,  
And do yuel and haue yuel · hope thow non other  
But after thi ded-day · the deuyl shal haue thi sowle!”

d. “Nos,” inquit, “sumus sacerdotes Domini, nos sumus sancta Cristi ecclesia, nobis concessa sunt a regibus et populis tot privilegia, nos non debet quisquam corrigere nisi papa.

e. Secundo considerarent reges quod sacerdotes sui domestici non sint ad laicale officium limitati.

f. Omnes clerici debent pure vivere de decimis oblacionibus et privatis elemosinis laicorum . . . omnia civilia dominia in regno debent esse in manibus secularium dominorum.

g. Et hinc scripsit pape Linconiensis volenti proficere unum inydoneum in sua diocesi: “obedienter resisto et contradicendo obedio.”

h. Accidentia sine substantia. Litterae fraternitatis. Clerus affluentia temporalium oneratur. Legius servire potest rebel-lando, si oportet, contra tyrannidem. Viri evangelici.

## MORAL PHILOSOPHY.

*The papers in Moral Philosophy are the same as those set for Honours in Philosophy.*

**Papers for Degrees in Science.****FIRST SCIENCE EXAMINATION.****Pure Science.**

[*For Papers in Mathematics and Natural Philosophy, see Papers in these Subjects for the Degree of M.A.; and for Papers in Chemistry, see Papers for First Professional Examination for Degrees in Medicine.*]

**BOTANY.**

**TUESDAY, 17th July 1900.—10 to 12 o'clock.**

1. Write a comparative account of the life-histories of *Puccinia graminis*, *Claviceps purpurea*, and *Eurotium repens*.
2. Arrange the British Gamopetalae in groups which shall exhibit their natural relationships.
3. Give an account of the development of the embryo in *Pinus*. Compare this with similar features in Angiosperms.
4. State what you know of the process of Carbon-dioxide-assimilation in plants.
5. Write an account of the vegetation of any wood known to you.

**Engineering.****MATHEMATICS.****FIRST PAPER.**

**FRIDAY, 12th October 1900.—11.30 A.M. to 1.30 P.M.**

1. Find the number of balls forming a pyramidal heap if there are 10 balls on each side of the square base.  
If the diameter of each be 12 cm. find the volume of the pyramidal box which will just cover them.
2. Find the volume of the zone cut from a sphere by two

parallel planes 7 cm. apart, if the radii of the two sections so made are 9 and 11 cm. respectively.

Prove the formula you use.

3. A hollow cone of height 5 and having the diameter of its base 3 contains a sphere which touches the cone and also the base. Find the volume of the free space left next the base of the cone.

4. If in a triangle  $a=25.8$ ,  $b=10.95$ ,  $C=98^\circ 54'$ , find  $c$ .

5. Trace the curves (i)  $2xy=x^2-8$ .  
(ii)  $xy^2=4(2-x)$ .

6. Find the relations between the roots and co-efficients of a cubic equation.

Find the sum of the cubes of the roots of the cubic

$$x^3+4x+5=0.$$

7. Find the square of the distance between the two points whose polar co-ordinates are  $(r_1, \theta_1)$ ,  $(r_2, \theta_2)$ .

Find the polar equation of a circle of radius  $a$  when the origin is (i) at the centre of the circle, (ii) on the circumference, (iii) at a distance  $c$  from the centre.

8. Investigate an expression for the area of a triangle in terms of the co-ordinates of its angular points.

Find the area of the triangle formed by  $y=mx+c$ ,  $y=m'x+c'$ ,  $y=0$ .

9. Find the length of the perpendicular from  $(h, k)$  on

$$ax+by+c=0.$$

Find the equation of the locus of the point whose distance from  $3x=4y+2$  is one-fifth of its distance from  $15y=8x+3$ .

10. Find the equation of the locus of the mid-points of a series of parallel chords of the parabola  $y^2=4ax$ .

If  $(h, k)$  be the mid-point of a chord of  $y^2=4ax$ , what is the equation of the chord?

SECOND PAPER

FRIDAY, 12th October 1900.—2.30 to 5.30 o'clock.

1. Find the volume of a tetrahedron three conterminous edges of which are each 300 cm. long while the other three edges are each 200 cm.

Find the volume of a regular octahedron each edge of which has a length of  $a$  units.

2. Find, from the focus and directrix definition, the equation of a hyperbola referred to its principal axes.

Find the eccentricity and asymptotes of  $4xy - 3x^2 - 2ay = 0$ . Sketch the curve.

3. Find  $\sum_{x=1}^n \frac{x^n - 1}{x - 1}$  when  $n$  is a whole number.

Find  $\sum_{x=0}^a \frac{x^x - 1 - x \log x}{x^2}$ .

4. Shew how to find and discriminate maximum and minimum values of functions of one variable.

Find them for  $(x-1)^4(x+3)^5$ .

5. Trace the curves  $r^2 = a^2 \cos \theta$  and  $r = a \cos^2 \theta$ .

Find the whole area of the second curve.

6. Represent the product of the determinants

$$\begin{vmatrix} a & b & c \\ b & c & a \\ c & a & b \end{vmatrix} \quad \text{and} \quad \begin{vmatrix} a^2 & b^2 & c^2 \\ b^2 & c^2 & a^2 \\ c^2 & a^2 & b^2 \end{vmatrix}$$

as a single determinant of the third order.

Factorise completely

$$\begin{vmatrix} a & b & c \\ a^2 & b^2 & c^2 \\ a^5 & b^5 & c^5 \end{vmatrix}$$

7. Find the eliminant of

$3x + y = a$ ;  $2x^2 + 3xy = b$ ;  $2x^2y = c$ ; and prove that certain of the values of  $x$  and  $y$  also satisfy the equation  $x^3 - ax^2 + bx - c = 0$ .



Solve completely the equation  $12x^3 + 8x^2 - 7x + 12 = 0$ , one of whose roots is rational.

8. Find directly the first differential coefficient of  $\sec x$ , and determine its fifth differential coefficient.

If  $y = x \sec x$  find a differential equation in  $y$ , which contains no explicit function of  $x$ .

9. Define the radius of curvature at any ordinary point on a curve. Determine the circle and radius of curvature at an extremity of the major axis of an ellipse of semi-axes  $a$  and  $b$ .

Prove analytically that if  $x$  and  $y$  are connected by an equation  $f(x, y) = 0$ , then

$$\left\{1 + \left(\frac{dy}{dx}\right)^2\right\}^{\frac{3}{2}} / \frac{d^2y}{dx^2} = \pm \left\{1 + \left(\frac{dx}{dy}\right)^2\right\}^{\frac{3}{2}} / \frac{d^2x}{dy^2}.$$

10. Give the rule of Integration by Parts.

Determine (i)  $\int dx e^x \cos x$ ; (ii)  $\int dx \sin^2 x \tan^3 x$ ;

(iii)  $\int dx 2x^3 / (a^2 - x^4)$ .

11. Find the position of the centroid of a quadrant of a circle of radius  $a$  when the density varies as the distance from the centre.

Find also its moment of inertia with respect to either radius which cuts off the quadrant.

12. Determine the equation to the tangent to an ellipse at any point on it whose eccentric angle is given.

Find the locus of the intersection of the tangents to an ellipse at points whose eccentric angles differ by a constant, and deduce a well-known particular case.

## Public Health.

### LABORATORY WORK.

MONDAY, 25th March 1901.—10 to 12 o'clock.

1. Describe in detail all the means at the command of the bacteriologist (irrespective of experiments on animals) for the

differentiation of the Bacillus of Diphtheria from other micro-organisms. Under what circumstances may these means fail?

2. What is meant by the terms (1) Obligate Anaerobic, (2) Facultative Anaerobic, and (3) Obligate Aerobic, as applied to micro-organisms, and give two examples of each class? Give examples illustrating a change in function of Facultative Aerobic organisms when grown anaerobically.

3. Describe Ritthausen's method for estimating Albumen in a fluid.

## PRACTICAL WORK.

*The following are examples of what have been given at the Examinations:—*

*(This part of the Examination lasts four days.)*

1. Determination of Albumen Fat and sugar in a sample of milk.

2. In a sample of unsterilised drinking water which also contains Bac. Coli and Bac. Typhosus, determine the presence of these micro-organisms.

3. Analysis of, and report on, a sample of potable water.

Each Candidate must recognise Bacteriological Cultures by means of Cultivation, Staining, and Microscopical Examination.

## PHYSICS.

MONDAY, 25th March 1901.—1 to 3 o'clock.

1. What is meant by stable and unstable equilibrium? What are the usual conditions of stability for a rigid body standing on a plane?

There are 3 equal bricks each 21 cm. long. The first is placed on the ground, the second symmetrically upon the first but shifted in the direction of its length. The third is similarly

placed on the second, thus forming equal steps. Find the largest amount of shift in order that the steps may not fall down.

2. Describe and explain the use of (i) a maximum thermometer, (ii) a compound microscope, (iii) a magnetic dip needle.

3. State the elementary facts connected with the action of electric currents on magnets and on circuits carrying currents.

Illustrate them by their application to the electric transmission of energy.

4. Explain "Doppler's Principle" of the change of pitch of a note heard when there is relative motion of the source and auditor towards one another.

If a source, giving out a note of 600 vibrations per second, is approaching the hearer, who is at rest, at 550 feet per second, what is the pitch of the note heard, sound travelling at 1100 feet per second?

5. Explain the action of (i) a siphon, (ii) a common pump, stating the limitations of each.

6. Define Specific Heat and Latent Heat, and describe one method of measuring either. Point out some important consequences of the high specific heat and latent heat of water.

7. State the laws of refraction of light, and explain the (slight) magnification observed when a plate of glass is laid over any object, such as the printed page of a book.

8. What is a spectrum, and how may it be obtained? What is the main characteristic of the spectrum of a gas as compared with that of a solid? What is an absorption spectrum? Give illustrations.

9. Trace the transformations of energy which occur in different parts of a circuit composed of a battery of Daniell cells, an electrolytic cell of dilute sulphuric acid, connecting wires of several different kinds of metals, and a galvanometer.

10. Describe the fundamental experiments in the induction

of currents. Mention some of the important uses of the induced current, pointing out in particular why the ordinary voltaic current from a cell would not do for such purposes.

### FINAL SCIENCE EXAMINATION.

## Pure Science.

### MATHEMATICS.

### NATURAL PHILOSOPHY.

The papers in Mathematics and Natural Philosophy are the same as for the Degree of M.A. with Honours in Mathematics and Natural Philosophy.

### EXPERIMENTAL PHYSICS.

SATURDAY, 6th April 1901.—9 to 12 o'clock.

*(Science Candidates to answer the first Ten Questions only.)*

1. Describe and explain fully the phenomena of Newton's rings as seen (1) by transmitted (2) by reflected light. In particular, calculate how the result depends on the angle of incidence.
2. Explain the phenomena presented by a refraction grating with transmitted and with reflected light, which is incident at any angle.
3. Describe, and account for, the appearances presented when a beam of light passes a straight edge.
4. Give an account of the experimental justification of the electromagnetic wave theory.
5. Signals oscillating (1) slowly, (2) rapidly, are sent along a copper wire. Describe carefully and completely what takes place during transmission. What difference is there if the wire be of soft iron?
6. Describe the main facts of colour-blindness, and give

an account of their explanation upon the Young-Helmholtz theory.

7. Give a general discussion of modern views of the constitution of matter. Consider specially the explanation of crystalline form, elastic properties, and change of molecular state.

8. Describe, and discuss, the relative advantages of some experimental methods of determining the speed of sound in air.

How would you determine the speed of sound along a solid rod?

9. Give an account of Forbes' and Angström's methods of determining thermal conductivity. Indicate the points, in each method, where errors may most readily arise.

10. An anchor ring of iron, six cm. in external diameter and one sq. cm. in sectional area, is cut across symmetrically so as to have a complete gap of 0.2 cm. At another part its sectional area is reduced to 0.5 sq. cm. by a symmetrical transverse groove 0.1 cm. wide. Give an approximate calculation of the number of ampère turns required for a total induction of 8000 c.g.s. units, the permeabilities where the section is complete, or reduced, being 2000, and 400, respectively.

## ASTRONOMY.

### FIRST PAPER.

THURSDAY, 28th March 1901.—11.30 A.M. to 1.30 P.M.

[Not more than FOUR Questions to be answered.]

1. Describe the striding level of a transit instrument and explain why it is necessary to reverse it. If the west end of the axis is  $i''$  above the horizontal line, prove that the cor-

rection for inclination to the observed time of transit is  $\frac{i}{15} \frac{\cos(\phi - \delta)}{\cos \delta}$ , where  $\phi$  is the latitude and  $\delta$  the declination of the star observed.

2. Describe the principal forms of reflecting telescopes in use, and state the reason why reflectors were originally introduced. Why are reflectors especially suitable for celestial photography?

3. Define the magnifying power of a telescope, and show how it may be determined. Why would it be wasteful to employ a power of 50 on a telescope of 30 inches aperture?

4. Develop the formula for finding the time by a single observed altitude of the sun, the latitude being known. Why ought the sun *not* to be near the meridian?

5. State the principal reasons why the body of the sun must be gaseous and not composed of liquid matter.

6. The moon revolves round the earth in 27 days 8 hours. Assuming that her distance from the centre of the earth is 60 times the earth's radius (which may be taken as 4000 miles), find the approximate value of the acceleration of gravity at the surface of the earth.

### EXTRA QUESTIONS.

[Two at least of these must be attempted by B.Sc. Candidates, who may restrict themselves to SIX Questions in all.]

*Time allowed for B.Sc. Candidates.*—10.30 A.M. to 1.30 P.M.

1. Assuming the earth to be spherical, its radius to be  $r$ , and the distance of a planet from the centre of the earth to be  $d$ , prove that the parallax is  $p'' = 206265 \frac{r}{d} \sin z$ ,  $z$  being the zenith distance. Define equatoreal horizontal parallax.

2. What is meant by annual parallax, and how is it determined?



3. Show how the eccentricity of a terrestrial meridian may be found by measuring the length of a degree in two different latitudes.

4. How can the latitude of a station be found by observations of transits of stars over the prime vertical?

## SECOND PAPER.

THURSDAY, 28th March 1901.—2.30 to 4.30 o'clock.

[Not more than FOUR questions to be attempted.]

1. Describe some graphical method of solving Kepler's equation  $M = E - e \sin E$ , and show how an approximate value of  $E$  may be corrected.

2. Find an expression for the velocity of a planet at any point of its orbit.

3. In what manner has the spectrum of a temporary star generally been different from that of the majority of stars?

4. Deduce Olbers' expression for the ratio of two distances of a comet from the earth.

5. Derive the formula for finding the mass of a planet from the observed period of revolution and distance of its satellite.

6. Prove that the curve which a star appears to describe in consequence of aberration is a circle parallel to the plane of the ecliptic, and would be a circle even if the earth moved in a parabola.

## CHEMISTRY.

### FIRST PAPER.

MONDAY, 16th July 1900.—9 to 12 o'clock.

(FIVE Questions to be answered.)

[Candidates for the Vans Dunlop and Mackay-Smith Scholarships are expected to attempt ALL the questions.]

1. What Oxides of Phosphorus are known? How can the two best known of these oxides be obtained in the purest state?

2. The vapour produced when sulphuric acid is heated has not the density which we should expect from the formula. How is this explained? Give experimental evidence of the soundness of the explanation.

3. How are silver and copper obtained from iron-pyrites containing small quantities of sulphides of these metals?

4. Describe the most important general modes of formation of Alcohols; and state the chief properties characteristic of alcohols.

5. How are Zinc-alkyl compounds prepared? Give some of the most important applications of these substances in organic synthesis.

6. Describe as fully as you can those iron minerals which are important as ores.

7. Describe the separation of Cobalt from Nickel by means of potassium cyanide and caustic alkali, and explain fully the chemical changes involved.

8. How are potassium bichromate and sulphuric acid used to distinguish a chloride from a bromide? Give full explanation of the process.

#### SECOND PAPER.

MONDAY, 16th July 1900.—1 to 3 o'clock.

(FIVE Questions to be answered.)

1. How is Uric acid usually prepared? What are the products of the action of nitric acid on uric acid? Give the structural formula of uric acid with the evidence on which it is based.

2. How is Benzaldehyde prepared? What is the action on benzaldehyde of (a) Reducing agents, (b) Caustic potash, (c) Phenylhydrazine, (d) Ammonia?

3. How is Glyoxal prepared? What is the action of Hydrocyanic acid on glyoxal, and what acid or acids can be obtained from the product of this action?

4. A substance on analysis gave the following results:—

0.1518 gram gave on combustion 0.2580 gram  $\text{CO}_2$  and 0.0775 gram  $\text{H}_2\text{O}$ . 0.2050 gram after heating with nitric acid and silver nitrate gave 0.1648 gram  $\text{AgBr}$ . What is the simplest formula for this substance?

5. Write a short essay on one of the following subjects:—  
(a) Prout's hypothesis; (b) The discovery of Bromine; (c) The earliest observed instances of Isomerism.

6. Mention as many new substances as you can that were discovered by Scheele, and write a short account of the circumstances of the discovery of any one of those you mention.

7. Give an account of the geometrical and optical properties of Quartz crystals.

8. Describe generally the Stassfurth salt deposits and the important minerals found in them.

9. What is meant by the term "Strength" as applied to acids or bases, and how may it be measured?

## PHYSIOLOGY.

### FIRST PAPER.

FRIDAY, 29th March 1901.—9 to 12 o'clock.

1. In what forms are proteids, carbohydrates, and fats absorbed from the alimentary canal? By what channels does each kind of foodstuff reach the general circulation?

2. How is the pulse produced? By what methods is it investigated?

Describe a typical pulse tracing, and indicate the manner in which its secondary curves are caused.

3. Describe the minute structure of the spinal cord in the cervical enlargement. Give a diagram to show the position of the tracts of conduction in its white matter.

4. What changes result (a) from section of the cervical sympathetic; (b) from stimulation of its peripheral cut end? How are the results you describe explained? Where do the nerve fibres involved in their production arise?

#### SECOND PAPER.

FRIDAY, 29th March 1901.—1 to 3 o'clock.

1. What changes take place in a muscle as the result of excitation of its nerve?

State how each change which you mention is experimentally investigated.

2. What are the chief organic constituents of the urine? State, with regard to each one, what are believed to be its precursors in the animal body, giving the evidence on which your statement is based.

3. What is visual purple? Where does it occur? Discuss its probable function.

#### GEOLOGY (INCLUDING MINERALOGY AND PALEONTOLOGY).

##### FIRST PAPER.

TUESDAY, 17th July 1900.—9 to 12 o'clock.

(Six Questions only to be attempted.)

1. Give some account of the changes effected by *Insolation* and *Deflation*.

2. Describe Mallet's method of estimating the depths at which an *Earthquake-shock* originates.

3. What is the *Law of decreasing Basicity*? Show how it is illustrated in the case of *Granite*.

4. Describe the conditions under which *Andalusite* occurs in rocks; give an account of the optical and other characters of the mineral, and of its mode of alteration.

5. Describe the more common types of basic igneous rocks found in the British Isles.

6. Describe the structure of a Belemnite, and state its systematic position and affinities; give the geological range of the *Belemnitidae*.

7. Give the leading characters of *Sigillaria*, *Spirifera*, *Echinus*, and *Goniatites*.

8. Give the zoological position and the geological range of the following forms: *Lepidodendron*, *Iguanodon*, *Hesperornis*, *Halysites*, *Discina*, *Nautilus*.

9. Draw a section to show how the relative date of the successive upheavals of a mountain-system can be determined.

10. What are *Interglacial* deposits, and what general conclusions have been drawn from their occurrence?

## SECOND PAPER.

TUESDAY, 17th July 1900.—1 to 3 o'clock.

(Four Questions only to be attempted.)

1. In a rock-section numerous six-sided sections of a transparent colourless mineral are observed. Rotated between crossed Nicols they remain completely dark. To what minerals might they belong, and what evidence would you consider necessary and sufficient to establish their identity?

2. Describe the microscopic characters of the following rocks:—Vogesite, Adinole, Radiolarian Chert, Hyperite, Leucite-tephrite, Schorl-rock, Abyssal red clay.

3. Describe as fully as you can the following structures, stating in each case where they occur:—Reaction rims; Lithophysæ; Variolite; Mortar structure.

4. Give an account of the chief types of Trilobites which occur in the Cambrian rocks.

5. Draw one or more sections to show how geological structure influences the form of the ground in regions which have been greatly denuded.

6. State the arguments for and against the organic origin of Eozoon.

## ZOOLOGY.

### FIRST PAPER.

FRIDAY, 12th October 1900.—9 to 12 o'clock.

(FIVE Questions to be answered.)

1. Explain the terms, "antithetic alternation of generations" and "heterogeny"; and illustrate by reference to Hydrozoa and Platyhelminia.

2. What are the main differences observed in the development of a marine annelid on the one hand and in an earthworm or leech on the other?

What are "teloblasts," and what part do they play in the latter cases?

3. Describe the classification of *either* the Crustacea, *or* the Mollusca, giving the most important facts on which the classification depends.

4. What is understood by "development by substitution of organs"? Give examples.

5. Explain and illustrate the following terms:—*Paranucleus*, *Polian vesicle*, *prostomium*, *symbiosis*, *commensalism*, *radula*, *warning colouration*.

6. How may "adaptation" and "change of function" be accounted for on the principle of natural selection? Illustrate by suitable examples.



SECOND PAPER.

FRIDAY, 12th October 1900.—1 to 3 o'clock.

(FIVE Questions to be answered).

1. Describe in detail any one theory professing to explain the ancestry of the Chordata. Criticise the theory you select.
2. How are the Ichthyopsida classified? Give the most important characters in which the system you describe is based.
3. Give an account of *either* (1) the views held as to the origin of the hair of mammals, *or* (2) the theories of the origin and history of the mammalian dentition.
4. Describe the various forms of the mammalian placenta. In any mammal you prefer give an account of its origin *and* structure.
5. Explain and illustrate the following terms:—*correlated variation, pangenesis, germ plasma, mitosis, prepotency, mongrel, hybrid, telegony*.
6. What is the geographical distribution of—Ratitae, Dipnoi, Hatteria, Peripatus? What explanation has been given of the various facts involved?

BOTANY.

FIRST PAPER.

MONDAY, 25th March 1901.—9 to 12 o'clock.

1. Give a general account of the Hydropterideae. Discuss the question as to their affinities with the Filicineae.
2. Write a short account of the Phycomycetes, with special reference to the view of their algal affinities.
3. Give a general description of Proteaceae. Discuss their affinities.

4. Give an account of the various mechanisms ensuring the dispersal of seeds with which you are acquainted in Angiosperms. Give illustrative examples.

## SECOND PAPER.

MONDAY, 25th March 1901.—1 to 3 o'clock.

1. Explain clearly what is meant by intramolecular respiration, and state how you would investigate it experimentally.
2. Describe the process of fertilisation in an Angiosperm. Discuss the homologies of Endosperm.
3. Write a short account of the process of Fermentation, as produced by yeast in a sugary solution.
4. What are the external factors of environment which have most influenced the evolution of the Vegetable Kingdom? Which are the dominant plant-groups of to-day? Show how their adaptations have favoured them in relation to the factors you mention.

## PRACTICAL BOTANY.

### FIRST PAPER.

FRIDAY, 29th March 1901.—2 to 5 o'clock.

1. Sketch, identify, and describe the specimens *B*, *C*, *D*, *E*.  
*B*=*Batrachospermum*, *C*=*Pilularia*, *D*=*Volvox*,  
*E*=*Sphagnum*.
2. Identify, by means of the flora provided, specimens *F*, *G*.  
*F*=*Mertensia*, *G*=*Prunus padus*.
3. Refer the specimens *H* and *I* to their natural orders.  
*H*=*Monochaeton*, *I*=*Eriostemon*.
4. Sketch, identify, and describe specimens *K*, *L*, *M*, *N*.  
*K*=*Geaster*, *L*=*Platyclada*, *M*=*Cycas* seedling,  
*N*=*Sphagnum*.

SECOND PAPER.

FRIDAY, 29th March 1901.—10 to 1 o'clock.

Write an illustrated account of the specimen provided. Make illustrative preparations. Sketch them and leave them for inspection.

Specimen=*Nectria*.

Engineering.

ENGINEERING.

WEDNESDAY, 3rd April 1901.—9 to 11 o'clock.

1. Describe in a general way how an extensive survey such as the Ordnance Survey is carried out. How is it commenced, and what methods are adopted to check its accuracy?

2. Explain how a railway curve can be laid out with a chain but without the use of a theodolite or other instrument for measuring angles, and calculate the necessary dimensions for a curve of 20 chains radius.

3. In a level field an excavation is taken out for a filter 30 yards square at the bottom and 30 feet deep, with side slopes of  $1\frac{1}{2}$  horizontal to 1 perpendicular. Calculate the cubic contents of the excavation, and if it is filled to the extent of one half of its capacity with water, what will be the height of the surface of the water above the bottom of the excavation.

4. Sketch a stone bridge with an ashlar arch to carry a road 35 feet wide over a double line of railway in full cutting, giving as many dimensions as possible, the approximate quantities of the various kinds of masonry, and the approximate cost.

5. What are the usual methods of dealing with slips in the slopes of excavations, and how are they best permanently protected? How would you deal with a railway cutting passing through running sand?

WEDNESDAY, 3rd April 1901.—3 to 5 o'clock.

1. Sketch a section of a single span roof for a railway station

200 feet wide, giving the principal dimensions of the members and an approximate estimate of the cost. Select a convenient distance between the main trusses, and sketch the details of the roof between them.

2. Sketch the superstructure of a steel girder bridge, 30 feet span and 30 feet wide, to carry an ordinary public road. Take out the quantities and form an approximate estimate of the cost.

3. Under what conditions do the Board of Trade allow and prohibit the use of cast-iron in railway under-bridges, and explain the danger of using cast-iron under certain circumstances.

4. Sketch a joint for the bottom boom of a riveted plate-girder bridge consisting of 4 steel plates each 18 inches broad by  $\frac{5}{8}$  inch thick, and give reasons for adopting the particular number and sizes of cover plates and rivets.

5. How would you proceed to ascertain whether a gathering ground was sufficient in area and otherwise suitable for the water supply of a given population.

THURSDAY, 4th April 1901.—9 to 12 o'clock.

1. Distinguish carefully between Reaction and Impulse Turbines. What circumstances decide which type and design of machine should be selected for any given case?

What is the use of a suction pipe? When is it fitted, and how does it affect the efficiency?

An axial flow turbine is required to utilise a fall of 12 feet with a supply of 212 cubic feet water per second. Let the angle of the guide blades be  $20^\circ$ , and the angle of the vane at exit be  $17^\circ$ .

Find the velocity of entry, velocity of flow from the wheel, the velocity of vane, the angle of vane at entry, the area of flow, the breadth of guide and wheel passages, and the revolu-

tions of the turbine per minute. The mean radius of wheel is 4.925 feet.

2. Describe some method of ascertaining the stability of a ship. What is meant by—Metacentric curve, curve of buoyancy, and range of stability? What conditions affect the latter?

A log of timber 12 feet long, has the section shown in sketch. The specific gravity of the timber is .75. Find its metacentre for small displacements and its moment of stability when heeled until an upper edge is at the water surface; and draw the curve of stability up to this point.

3. What is the object of placing air vessels on a Hydraulic main, through which water is being pumped? Where should they be placed? how are they designed? and upon what considerations does their capacity depend?

A fire engine is required to throw a jet 100 feet high from a hose 120 yards long and  $3\frac{1}{2}$ " diameter, fitted with a nozzle of special design  $1\frac{1}{2}$ " diameter. The coefficient of velocity is .994 and there is no contraction. Allow a margin of 15 per cent. to cover losses not otherwise specified. Calculate the pressure necessary per square inch in the discharge chamber of the engine. Take coefficient of friction in the pipe .0065.

4. Explain why cylinder condensation is a serious source of loss in the steam engine, and state the various modes of eliminating this loss as far as possible. State which is the most important of these methods. Show how condensation depends on speed, ratio of expansion, and size of the engine.

In a single cylinder condensing engine the boiler pressure is 98 lbs. per square inch abs. Specific volume of steam corresponding is 4.47 cubic feet. The diameter of cylinder is 12 inches, stroke 20 inches, and Revolutions 120 per minute. Cut off is at half stroke. The total clearance volume at one end of the cylinder is  $\frac{1}{10}$ th the cyl. vol. It is found that the boiler evaporates 2870 lbs. water per hour. How much steam is condensed?

5. State concisely how you would proceed to make a trial of a horizontal compound surface condensing steam engine, which has jacketed cylinders and a fly wheel on the crank shaft. The steam is supplied by a Lancashire boiler.

FRIDAY, 5th April 1901.—9 to 11 A.M.

1. Deduce expressions to give the Deflection, Slope, and Curvature of a beam supported at both ends, under a uniformly distributed system of loading.

A steel rail is tested by allowing a weight to drop upon the middle point of a three foot length supported at the ends. If the deflection is not to exceed  $\frac{1}{8}$ th inch, find from what height a weight of  $\frac{1}{2}$  ton may be dropped. The rail has the section given in sketch.  $E=29,500,000$  lbs.

2. State the conditions of equilibrium of a masonry joint, and show how these conditions are modified by consideration of the strength of the material of construction. Show how to determine the limits of deviation of the centre of pressure, and find the ratio for a circular section.

What application has this theory to the limiting height of a masonry chimney?

3. A Beam is 50 feet span, and rests on three supports,  $A$ ,  $B$ , and  $C$ .  $AB=22$  feet, and carries a weight of 10 tons 6 ft. from  $A$ , and another of 12 tons 16 ft. from  $A$ . The segment  $BC$  is loaded with a weight of 8 tons 18 ft. from  $C$ , and one of 12 tons 24 ft. from  $C$ . Find the supporting forces and the points of contrary flexure in each segment.

4. In testing a specimen of mild steel of .82" diameter the Results given were obtained. Draw the curve connecting stress and strain, pointing out the yield point. Find the modulus of elasticity of the specimen and the work done in stretching it to



destruction: also the ultimate strength in tons per square inch of original area.

# DRAWING.

SATURDAY, 6th April 1901.—9 to 12 o'clock.

1. Two spur wheels, *A* and *B*, have involute teeth. *A* has 24 teeth, *B* has 60. The pitch is 1 inch. If *A* is the driver find the addendum for each, the arc of approach being  $2''$ , and the arc of recess  $.843''$ .

2. From the indicator diagrams and other data supplied make a drawing of the Twisting Moment diagram. Give the ratios of maximum and minimum to the mean.

3. Plot the locus of an equation of the form  $y=mx^2$  when  $m=\frac{1}{4}$ . Find the focus and directrix, and show how to draw the evolute to the curve.

4. Find the plane containing the given line *AB*, and making an angle of  $60^\circ$  with the horizontal plane of projection.

5. Draw plan and elevation of a regular tetrahedron of  $2''$  edge when one edge is parallel to the Vertical Plane, and a face opposite that edge is inclined  $30^\circ$  to the Horizontal Plane of projection.

SATURDAY, 6th April 1901.—2 to 5 P.M.

Select either of the following, and make a carefully finished drawing.

1. The Intrados of an arch of 60 ft. span and 20 ft. rise is the segment of a circle. The voussoirs of the arch are of stone weighing 140 lbs. per cubic foot, and the superincumbent load may be taken at 480 lbs. per lineal foot of the ring. The abutments are 15 ft. high to the springing of the arch. Make a drawing of the arch ring. Determine the linear arch: and design abutments suitable to resist the thrust of the arch.

2. The High Pressure Cylinder of a horizontal condensing steam engine is 10 inches diameter. The stroke is 16 inches and the boiler pressure 130 lbs. per sq. inch abs. Take the length of the piston rod at 24 inches. Allow for variation of stress in the rod, and find its diameter.

The guide-bars are cast with the frame of the engine, and are bored out to a diameter of 11 inches.

Design a suitable crosshead, and show how it is attached to the rod.

## DYNAMICS.

THURSDAY, 4th April 1901.—2 to 5 P.M.

1. Find expressions for the component accelerations of a point along the tangent and normal of its path.

If a point move along a cycloid so that the tangent through the moving point turns uniformly, prove that the acceleration is constant in magnitude.

2. Prove that the path of a particle, moving under an attraction varying inversely as the square of the distance from the centre of attraction, is a conic section.

3. State shortly the laws of statical friction. Use them to find the tangent of the angle made with the horizon by a uniform ladder resting on a rough horizontal plane and against a rough vertical wall, when it is on the point of slipping.

Find what this angle becomes when a man, whose weight is that of the ladder, stands on the top of the ladder, the coefficients of friction being  $\mu$  and  $\mu'$ .

4. Find the moment of inertia of a uniform thin hemispherical shell about a tangent at its pole.

Find the period of small oscillations after the shell has been slightly tilted from its position of equilibrium with the curved surface resting on a perfectly rough horizontal plane.

5. A light string  $ABCDE$  has weights fastened to  $B, C, D$ . It is hung up by  $A$  and  $E$  so that the distances from  $A$  of  $B, C, D, E$  are, horizontally and vertically downwards,  $(2, 5), (4, 6), (6, 3), (7, 0)$  respectively. Find the ratios of the weights and of the tensions in the different parts of the string.

6. A particle is projected with velocity  $u$  in a direction making an angle  $\alpha$  with the horizon. If the coefficient of restitution be  $e$  for impact between the particle and the horizontal plane through the point of projection, compare the distances between the successive points of impact.

Compare the distances if the plane make an angle  $\beta$  with the horizon and the particle move in a vertical plane containing a line of greatest slope.

7. How many numbers are required to determine completely the motion of a rigid body parallel to a given plane. Show that the motion can at every instant be represented by rotation about a definite axis perpendicular to the plane.

Discuss the case when the body moves so that one point in it describes a circle and another moves in a straight line which is a tangent to the circle, working out the equation of the locus in space of the instantaneous centre of rotation.

8. Form and solve the equation of motion of a particle with one degree of freedom, the force of attraction being directly as the distance from the position of equilibrium, and the resistance being directly as the speed.

The mass being 1 oz. and the frequency 500 times per second, find the forces involved when the amplitude begins at  $1/10$ th of an inch, and after 5 seconds becomes reduced to  $1/100$  of an inch.

9. Show that any system of forces may be reduced in an infinite number of ways to a single force and a couple; that there is one definite line of action of the force when the axis

of the couple is parallel to the force ; and that in this case the couple has a minimum value.

10. Prove that the kinetic energy of a rigid body is equal to the kinetic energy of the whole mass supposed condensed at the centre of mass and moving with its velocity together with the energy of rotation of the body relatively to the centre of mass.

Discuss the motion of a rod set ladder-like against a smooth vertical wall and allowed to fall, the horizontal plane on which the lower end bears being also smooth. Show that the rod will leave the vertical wall during its fall.

11. Assuming that the elongations  $e, f, g$ , can be expressed as linear functions of the normal stresses  $P, Q, R$ , find the values of the coefficients in terms of the rigidity and the resistance to compression. Also use the equations to express Young's Modulus and Poisson's Ratio in terms of these constants.

12. Under what conditions can a simple flexure be supported in a beam by couples applied at the ends in the plane of flexure.

Deduce the equation  $\frac{d^4y}{dx^4} = -w$  ( $w$  being proportional to the weight per unit length) for every point of a beam which nowhere deviates much from the horizontal, and apply it to find the form assumed by a beam with its ends supported on edges at the same level. Find, in particular, the droop at the centre.

## GEOLOGY.

TUESDAY, 17th July 1900.—1 to 3 o'clock.

1. What geological conditions have mainly determined the forms assumed by the land-surface under the operation of denudation ?

2. A river flows along the strike of a series of strata dipping west at an angle of  $10^{\circ}$  to  $15^{\circ}$ —on which side of the river's course will cliffs tend to be developed? Give reasons for your answer.

3. Give the distinguishing characters of *Intrusive Sheets* or *Sills*.

4. Give some account of the mode in which ores and lodes are supposed to have been introduced.

5. Draw *one* continuous section to illustrate the following structures:—Isoclinal Folds, Normal Fault, Dyke, Unconformity, Outlier, and Inlier.

## Public Health.

### MEDICINE.

WEDNESDAY, 27th March 1901. —10 to 12 o'clock.

#### I.—MEASLES.

Mention some of the conditions which may affect the mortality in an epidemic of Measles, as regards

(a) The disease itself.

(b) Its complications and sequelae.

#### II.—RICKETS.

What are the leading characters of Rickets? Discuss the question of diet as a factor in its causation and prevention.

#### III.—DIPHTHERIA.

In a localised outbreak of Diphtheria, what line of inquiry would you pursue with the view of tracing its origin; and what means would you adopt to prevent its spread?

# SANITARY LAW.

WEDNESDAY, 27th March 1901.—1 to 3 o'clock

1. State the provisions of the law as to the formation of Port Sanitary Authorities.
2. What are the duties of a Medical Officer of Health under Part II. of the Housing of the Working Classes Act? Give an example of a Representation regarding a row of Miners' Cottages where there is abundant air-space around the row but where the buildings are defective.
3. Distinguish between "Common Lodging House" and "House let in Lodgings," and contrast the legal provisions as regards each.

# VITAL STATISTICS.

WEDNESDAY, 27th March 1901.—4 to 6 o'clock.

1. The Report of the Medical Officer of Health of a manufacturing town, with an estimated population of 62,580, contains the following statistics for 1895:—

*Death Rates per 1000 of the estimated population at all ages.*

All Causes.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	"Fever."	Diarrhoea.	Plithisis.
22·7	·85	·4	1·1	·16	·60	·16	·54	1·5

Birth Rate, 38·9.

Infantile Mortality, 157.

Comment on these rates in relation to the standard rates for England and Wales, and state your opinion as to the sanitary condition of the town.



2. A fashionable health resort, where the "season" is from November to May, advertises as an inducement to visitors that its death rate for ten years has been 11 per 1000. Accepting the statement as technically correct, point out every fallacy likely to be connected with it.

### SANITATION.

THURSDAY, 28th March 1901.—10 to 12 o'clock.

1. A Mansion-house of two storeys and attics is converted into multiple dwellings of one or two rooms, in the absence of building bye-laws, and with as little structural alteration as possible. You are of opinion that the premises structurally constitute a nuisance under the Public Health Acts, and that a prosecution should be instituted.

Write out (*a*) the certificate you would be prepared to give, and (*b*) notes of the evidence you would submit in support of the certificate.

2. Sketch (roughly) the ground-plan of an infectious hospital for a town of 40,000 inhabitants, showing the dimensions of the ground and the position and relative size of the buildings. Give a short description of such an hospital, stating the purposes and accommodation of the separate parts.

3. Discuss from the epidemiological and bacteriological points of view, the arguments for and against the opinion that certain diseases may be spread by aerial infection.

### PRACTICAL SANITATION.

THURSDAY, 28th March 1901.—1 to 4 P.M.

N.B.—*Answers should, as far as possible, be illustrated by sketches or diagrams.*

1. In the event of its being necessary to make a thorough inspection of the drains and fittings of a dwelling-house, how

would you proceed ; and if the house is not a modern one, what conditions would you expect to find ? In order to insure complete disconnection what points would require to be specially attended to ? How would you arrange a new system of drains and fittings in accordance with present day requirements ?

2. Define hydraulic mean depth and hydraulic gradient ; and show how they enter into calculations regarding flow of water in (a) an open channel, and (b) a pipe running full. Explain fully the different conditions in the two cases.

In a canal the cross section of the stream is 20 feet broad and 4 feet deep. What must be the fall in feet per mile in order that it deliver 4,500,000 gallons per hour.

3. Upon what circumstances does the choice of a method of final disposal of sewage and of refuse depend ?

Describe briefly and distinguish clearly between intermittent downward filtration and broad irrigation.

Explain the construction of any type of refuse destructor which you may consider to be the most efficient, and state upon what conditions efficiency depends, what temperature is obtained, and what is the approximate cost of destruction.

4. Define and give short explanations of the following:—Footings—String Course—King and Queen Closers—Rendering—Wall Plate—Flashing—Matched Joint—Wiped Joint—Framing—Mansard Roof—Waste Weir—Weir Gauge.

## *Agriculture.*

### AGRICULTURE.

FRIDAY, 29th March 1901.—9 to 12 o'clock.

1. State fully the relationship between organic matter and the fertility of soils.

Explain the part played by organic matter in the formation of a good pasture.

2. What points would you take into consideration in putting a valuation on grass-land?

3. Describe the cultivation of a potato crop from the time the land is ploughed until the potatoes are stored, stating the kinds and quantities of manures you would apply. Give a detailed account of the cost of growing an acre of potatoes and the price you would expect to realise.

Name a dozen of the most recent varieties introduced into cultivation.

4. State in what way agricultural experiments are of value to farmers.

In selecting land for experiments, what are the chief conditions to be considered?

5. Explain the various methods of treating farmyard manure. What system is accompanied by the least loss of manurial value?

6. In raising Live Stock, what are the advantages in breeding from pure bred or pedigree sires?

7. Assuming that you were required to rear fifty calves from birth until they were twelve months old, and that whole milk could be had at 6d. per gallon and separated milk at 2d. per gallon, state how you would treat these calves during this period, and what kinds and quantities of foods other than milk they would consume.

What would be their probable value per cwt., live weight? Write out a statement showing the estimated cost of rearing, and the total value of the calves.

8. If you rented an arable farm of 300 acres at £2 per acre, situated within two miles of a large town, the soil being a medium loam, state what rotation you would adopt, what stock you would keep, and the number of "hands" you would employ.

9. Mention what you know regarding the method of estimating the amount of compensation which should be paid to a farmer for the unexhausted value of Bone Meal, Basic Slag, Linseed Cake, and Cotton Cake, applied to or consumed on the land during the last three years of the tenancy. Assume that the manures were applied to land to which they were suited.

## AGRICULTURAL CHEMISTRY.

FRIDAY, 29th March 1901.—1 to 3 o'clock.

1. What are Superphosphates? How are they prepared? What are the causes of "reversion" in superphosphates? In what circumstances would you prefer a *high grade* to a *low grade* superphosphate?

2. Show how the amount of interstitial space in a soil may be determined. What relation does it bear to the size of the particles? Mention any important property of soils that depends upon the amount of interstitial space.

3. Give examples of amides, gums, waxes, glucosides, and albuminoids, and indicate their composition and chief properties.

4. What is the composition of Nitrate of Soda and of Sulphate of Ammonia? What are the chief impurities to which each of these manures is liable? What considerations would determine your preferring the one to the other—firstly as a top-dressing, and secondly as an ingredient of a mixed manure?

5. What are meant by the Digestibility, the Nutrient ratio, the Manurial value, and the Residual manurial value of a fodder? How are these determined?

6. What is Rennet? How is it made? In what way is the curdling action of rennet affected by the amount of lime salts contained in milk?

VETERINARY HYGIENE.

MONDAY, 25th March 1901.—1 to 3 o'clock.

[Six Questions to be attempted.]

1. What bones form the cranium of the horse? Describe them briefly, and state their situation relative to each other.
2. Describe the process of dentition in the horse from birth up to five years of age.
3. Name the foetal membranes, and state their function, situation relative to each other, and mode of attachment to the uterus of the mare and cow.
4. What is meant by the phrase "retention of the cleansing"? When would you consider it existed; what are the consequences to be feared when it occurs in the mare and cow, and what treatment and precautionary measures would you adopt if a case occurred among your animals in-foal or in-calf?
5. Give the causes, symptoms, and treatment of choking in cattle.
6. What is foot and mouth disease? State what you know of its origin and manner of spreading, symptoms, treatment, and the precautionary measures you would adopt to prevent its spread to or from stock of your own.
7. What is a Thrush? Give the causes, symptoms, and treatment of the disease.
8. What is the common seat of Tympanitis in the horse and ox, and what are the causes, symptoms, and treatment in each animal?

GEOLOGY.

*Same as for Engineering.*

## AGRICULTURAL ENTOMOLOGY.

SATURDAY, 6th April 1901.—9 to 11 o'clock.

1. Explain how the mouth-parts of insects (mandibulate and haustellate) and their method of breathing are related to the means of insect destruction.
2. What are the characters of the Order Diptera? Give the systematic and common names of five insects belonging to this Order.
3. Write an account of the Turnip Fly or the Bean-seed Beetle, and prescribe means of prevention and remedy in the example you select.
4. Name three insects injurious to Corn crops, and say how you would recognise them by their work.
5. Describe the life-history of the Winter Moth or the Codlin Moth, and give means of prevention and remedy.
6. Give the sub-divisions of the Order Hymenoptera; say what the characteristics are of these sub-divisions, and give examples of insects in each.

## ECONOMIC SCIENCE.

*Same as the First Paper for M.A.*

## FORESTRY.

SATURDAY, 6th April 1901.—11.30 to 1.30 o'clock.

1. (a) State the comparative advantages and disadvantages of pure crops and mixed crops.
- (b) Under what circumstances may the planting of a single species be desirable?
- (c) Give general rules for the formation of mixed plantations.



2. (a) What are the advantages of having a *normal distribution of age classes* throughout woodlands?  
(b) How can the *normal growing stock* or capital in wood requisite for any Working Circle be calculated approximately enough for practical purposes?
3. (a) What are meant by the "Sylvicultural characteristics" of a tree?  
(b) State what you know of the Sylvicultural characteristics of the Douglas Fir (*Pseudotsuga Douglassii*).
4. (a) What are the comparative advantages and disadvantages of sowing and planting?  
(b) Describe the method of planting known as "notching," and criticise the use of this method as regards different kinds of soil.
5. (a) Describe the Pine Saw-fly (*Lophyrus pini*) and the nature of the injury it does to forest trees.  
(b) Give a brief sketch of its life-history, and indicate the measures that may be taken against it.
6. (a) To what causes may the decay of timber be due?  
(b) By what artificial methods can timber be rendered more durable?  
(c) Describe what you consider to be the best of such artificial means of preserving timber, and give your reasons for preferring that to the other methods also in use.

## Papers for Degree of B.D.

## DEPARTMENT I.

## HEBREW.

TUESDAY, 26th March 1901.—10 to 1 o'clock.

## A.

1. Point the following:—

1 ויתקבצו כל זקני ישראל ויבאו אל-שמואל הרממה:  
 2 ויאמרו אליו הנה אתה זקנת ובניך גא הלכו בדרכיך  
 3 עתה שימה-לנו מלך לשפטנו ככל-הגוים: ויַרַע הדבר  
 בעיני שמואל כאשר אמרו תנה-לנו מלך לשפטנו ויתפלל  
 4 שמואל אל-יהוה: ויאמר יהוה אל-שמואל שמע בקול  
 העם לבל אשר-יאמרו אליך כי לא אתך מאסו כי-אתי  
 5 מאסו ממלך עליהם: ככל-המעשים אשר-עשו מיום  
 העלתי אותם ממצרים ועד-היום הזה ויעזבני ויעבדו  
 אלהים אחרים בן המה עשים גם-לך:

2. Translate, adding notes on the text, syntax, and exegesis:—

(a) וַיָּבֹא וְהִנֵּה עָלָיו יָשֵׁב עַל-הַפֶּסֶס יָד דָּרָךְ מְצֹפֶה בִּי-הִיָּה לְבֹ  
 חָרָר עַל אֲרוֹן הָאֱלֹהִים:

Cf. *kai' idon' Hlei . . . para tēn pūllyn skopeúōn tēn ódōn.*

(b) וַיֹּאשׁ דָּגוֹן וַשְׁתִּי בָּפוֹת יָדָיו בְּרִתּוֹת אֶל-הַמִּפְתָּן רַק דָּגוֹן נִשְׁאַר

עָלָיו:

(c) וַיֹּאמֶר יִשָּׂאֵל לְאִחִיהָ הַנִּיֶּשֶׁה אֲרוֹן הָאֱלֹהִים בִּי-הִיָּה אֲרוֹן

הָאֱלֹהִים כִּי־הוּא וּבְנֵי יִשְׂרָאֵל:

3. What etymologies have been proposed for Samuel, Ichabod, and Dagon? How do modern scholars explain the

various designations of the Ark to be found in 1 Samuel? Remark on the importance of this book for the origin and significance of the prophetic order.

4. Translate:—

1, 2 בַּל־הָעַמִּים תִּקְעוּ־בָךְ הָרִיעוּ לֵאלֹהִים בְּקוֹל רִנָּה : בִּי־יְהוָה עֲלִיּוֹן  
3 נֹרָא מִלֶּךְ גָּדוֹל עַל־בַּל־הָאָרֶץ : יִדְבֹר עַמִּים תַּחֲתֵינוּ וּלְאֻמִּים תַּחַת  
4, 5 רְגֵלֵינוּ : מִלֶּךְ אֱלֹהִים עַל־גּוֹיִם אֱלֹהִים יֹשֵׁב עַל־בֶּסֶס קִדְשׁוֹ : נְדִבֵי  
עַמִּים נֹאסְפוּ עִם אֱלֹהֵי אֲבֹתָם כִּי לֵאלֹהִים מִגְנֵי־אָרֶץ מֵאֵד נֶעֱלָה :

5. Parse הָרִיעוּ (verse 1), נֹרָא (verse 2), יִדְבֹר (verse 3), and נֹאסְפוּ (verse 5). Remark on the form מִגְנֵי, and give examples of similar formations; give the syntax of 2a, and another possible reading of 5a. Comment on the dominant idea of this Psalm.

6. Translate:—

1, 2 אֱלֹהִים אַתָּה יָדַעְתָּ לְאוֹלָתִי וְאִשְׁמוֹתַי מִפֶּה לֹא־נִכְחָדוּ : אֲלִיבִשׁוּ  
3 בִי קוֹיָד אֲדַנִּי יִהְיֶה צְבָאוֹת אֲל־יִכְלְמוּ בִי מִבִּקְשֵׁיךְ אֱלֹהֵי יִשְׂרָאֵל :  
3, 4 כִּי־עַלֶיךָ נִשְׁאָתִי חֲרָפָה בִּפְתָּה כָּל־פֹּה פִּנִּי : מוֹזֵר הָיִיתִי לְאֹתִי וְגִבְרִי  
5 לִבִּנִי אָמִי : כִּי־קִנְאָת בֵּיתְךָ אֲכַלְתִּי וְחֲרָפוֹת חוֹרְפִיד נָפְלוּ עָלַי :

7. Write a short note on the Messianic application of this Psalm, showing from the above extract the limits of such application.

8. Examine the following passages critically, and translate as emended:—

(a) הָאֱמָנָם אֵלֶם צָדֵק תִּדְבְּרוּ

בְּאָרֶץ חַמִּס יְדִיכֶם תִּפְלְסוּן :

Cf. LXX. ἀδικίαν αἱ χεῖρες ὑμῶν συμπλέκουσιν.

(b) לָךְ דְּמִיָּה (σοὶ πρέπει) תַּחֲלָה אֱלֹהִים בְּצִיּוֹן וְלָךְ יִשְׁלַם־נֶדֶר :

## B.

## 1. Translate:—

(a) Then I saw Heaven opened and, lo, a white horse appeared. And he that rode the white horse was called Faithful and True. And his eyes were a flame of fire and many crowns were on his head. And he had a name written which no man understood but he himself. He was clothed in raiment red with blood, and the name he was called was The Word of God. The armies of heaven followed him on white horses, clothed in fine linen, white and pure. And on his garment and on his thigh he had a name written, King of Kings and Lord of Lords.

(b) Make no covenant with them. It was an accident which happened to us. His age is about twenty.

## 2. (a) Translate:—

וַיֵּרֶע אֶל־יִצְחָק רָעָה גְדוֹלָה וַיַּחַר לוֹ: וַיִּתְפַּלֵּל אֶל־יְהוָה וַיֹּאמֶר אָנָּה  
יְהוָה הַלּוֹא־זֶה דְּבָרִי עַד־הַיּוֹמִי עַל־אֲדָמָתִי עַל־בֶּן קִדְמָתִי לְבָרַח תְּרִשִׁיטָה  
כִּי יִדְעָתִי כִּי אַתָּה אֶל־חַמּוֹן וְרַחוּם אַרְךָ אַפַּיִם וְרַב־חֶסֶד וְנָחֵם עַל־  
הָרָעָה: וְעַתָּה יְהוָה קַח־נָא אֶת־נַפְשִׁי מִפָּנָי כִּי טוֹב מוֹתִי מַחְיִי:  
וַיֹּאמֶר יְהוָה הִתִּיב חֲרָה לָךְ:

(b) Write short notes on the forms וַיֹּאמֶר, הַיּוֹמִי, לָךְ, מִפָּנָי, and the meaning of the underlined phrases; on the usage of עַד, and the meaning of the underlined phrases.

## 3. Translate:—

הָיוּ שְׁרֵי יְהוּדָה בְּמִסְיָגִי נִבְּלָל עֲלֵיהֶם אֲשַׁפּוֹף בְּפָנִים עֲבָרָתִי: עָשׂוּ  
אֲפָרִים רָצוֹן מִשְׁפָּט כִּי הוֹאִיל הַלֵּךְ אַחֲרֵי־צוֹ: וְאֲנִי כָעֵשׂ לְאֲפָרִים  
וְכִרְקַב לְבֵית יְהוּדָה: וַיֵּרָא אֲפָרִים אֶת־חֲלָיו וַיְהוּדָה אֶת־מִזְרוֹ וַיִּלָּךְ  
אֲפָרִים אֶל־אֲשׁוּר וַיִּשְׁלַח אֶל־מֶלֶךְ יָרֵב וְהוּא לֹא יוֹכֵל לְרַפָּא לָכֶם וְלֹא־  
יִגָּה מִכֶּם מִזְזֹר:

4. (a) Translate (after correction of the closing verse):—

בַּעֲנֵבִים בַּמִּדְבָּר מִצֵּאתִי יִשְׂרָאֵל בְּבִכּוּרָה בְּתֹאנָה בְּרֵאשִׁיתָהּ רֵאִיתִי  
אֲבוֹתֵיכֶם הַמֹּה בָּאוּ בְעַל-פָּעוֹר וַיִּנְזְרוּ לַבִּשְׁת׃ וַיְהִי יִשְׁקוּצִים כְּאַהֲבָם :  
אֶפְרַיִם בְּעוֹף יִתְעוֹפֵף בְּבוֹרָם מִלֵּדָה וּמִמָּטֶן וּמִהַרְיוֹן : כִּי אִם-יִגְדְּלוּ  
אֶת-בְּנֵיהֶם וְשִׁכְלָתֵם מֵאֲדָם כִּי-גַם-אֹוִי לָהֶם בִּישׁוּרֵי מַחֶם : אֶפְרַיִם  
כְּאִשְׁרֵר-רֵאִיתִי לְצוֹר שְׁתוּלָה בְנוּהָ וְאֶפְרַיִם לְהוֹצִיא אֶל-הַיָּרֵד בְּנָיו :

(b) What Hebrew text corresponds in last verse to the LXX (AQ): Ἐφράιμ ὃν τρόπον εἶδον εἰς θήραν παρέστησαν τὰ τέκνα αὐτῶν, καὶ Ἐφράιμ τοῦ ἐξαγαγεῖν εἰς ἀποκρίτησιν τὰ τέκνα αὐτοῦ? Remark in detail on the consonantal changes involved.

5. Write explanatory notes on:—

לַבִּשְׁת׃ (in question 4): מִלֵּךְ יָרֵב : אֶכְתָּב־לוֹ רַבִּי תוֹרָתִי : קָרָא  
שְׁמוֹ יִזְרְעֵאל : מִיָּמֵי הַגְּבֻעָה חֲטָאתָ יִשְׂרָאֵל : וְלֹא תִקְרָאִי לִי עוֹד בַּעֲלִי :

### OLD TESTAMENT HISTORY AND INTRODUCTION.

6. How far was Josiah's religious policy a novelty? What were its lasting effects?

7. What light is thrown by the duplicate narratives of the books of Samuel on the mode of their composition?

Or,

Discuss briefly the character and purpose of the book of Jonah.

8. What is the modern view of the origin of the Septuagint version? Whence the name?

### APOLOGETICAL THEOLOGY.

TUESDAY, 26th March 1901.—2 to 5 o'clock.

#### A. THE CAUSES OF MODERN DOUBT AND THE GROUNDS OF FUNDAMENTAL CHRISTIAN BELIEFS.

1. Enumerate and classify the chief causes of Modern Doubt,

and indicate what causes give a specific character to religious scepticism in Britain, Germany, and either France or Italy.

2. Examine the following statement:—"Modern science, physical, mental, and moral, is sapping the bases of all supernaturalist systems."

3. Calvinism has been charged with being a fruitful source of unbelief. On what grounds and with what justice?

4. Appreciate the following statement:—"The moral and spiritual phenomena of Christ's character are such as to occasion far greater difficulties without the supernatural than with it."

#### **B. THE VARIETIES OF NATURALISTIC AND RATIONALISTIC THEOLOGY WHICH HAVE HAD REPRESENTATIVES IN BRITAIN.**

1. Compare and contrast the Broad-Churchism of the nineteenth century with the Rational Theology of the seventeenth both in respect of their general principles and special features.

2. Give an account of the theological opinions of (*a*) Mr. Matthew Arnold, or (*b*) the English Hegelians.

3. Criticise the statement—"Naturalism is Rationalism developed."—(A. J. Balfour).

4. Indicate in what respects modern Unitarianism may be deemed inadequate as a religious philosophy; and the services rendered to religion by modern Unitarians.

#### **C. THE CHRISTIAN DOCTRINE OF IMMORTALITY; THE OBJECTIONS WHICH HAVE BEEN TAKEN TO IT, AND THE REPLIES WHICH HAVE BEEN GIVEN TO THEM.**

1. Discuss the following statement:—"Disbelief in immortality is the exception in human history: and a study of the facts shows that it only originates after a certain stage of culture has been attained, and in connection with a certain stage of moral declension."

2. Enumerate and appraise the (*a*) exegetical and (*b*) moral



considerations which have been urged in support of the theory of an intermediate state.

3. Indicate the method by which Christ enforced the belief in immortality; and show its superiority over the method of the ethnic religions.

4. Carefully differentiate the following, and give the eschatological significance of each:—

ἡ ἐξανάστασις ἡ ἐκ νεκρῶν.—PHIL. iii. 11.

ἐν τῇ παλιγγενεσίᾳ.—MATT. xix. 28.

ἐν τῇ ἡμέρᾳ τοῦ κυρίου.—1 COR. v. 5.

ἐν τῇ παρουσίᾳ τοῦ κυρίου.—1 THESS. iii. 13.

## DEPARTMENT II.

### ECCLESIASTICAL HISTORY.

WEDNESDAY, 27th March 1901.—10 A.M. to 1 P.M.

#### A.

1. What account of the Christian ministry is given in the *Διδαχὴ*?

2. What was the origin of the earliest creeds and the history of the formulation of the "Apostles' creed"?

3. Describe the form of public worship in the old Catholic Church.

4. What were the Paschal controversies?

5. Give an account of the works of Eusebius of Caesarea or of those of Augustine.

6. Describe the original character and function of penance, and its modifications until the fifth century.

7. Give an account of the Trinitarian controversies from Arius to 381 A.D.

8. Write notes on (a) the Christian basilica, (b) the use of the tonsure, (c) the stylites.

## B.

1. What clerical abuses in the Scottish Church were officially recognised to exist at the beginning of the fifteenth century? What steps were taken against them during the century?

2. What were the main features in James I's ecclesiastical policy? Trace the course of his conflict with the authority of the Pope.

3. What share had the Church in the establishment of University education in Scotland in the fifteenth century? Give dates.

4. Give an account of the Lollard movement in Scotland during this century.

## SYSTEMATIC THEOLOGY.

WEDNESDAY, 27th March 1901.—2 to 5 o'clock.

### A. THE HISTORY OF CHRISTIAN DOGMATICS SINCE THE REFORMATION, AND ESPECIALLY DURING THE PAST CENTURY.

1. Into what periods may the history of Protestant Dogmatic be naturally divided? Characterise each period.

2. Indicate in what respects the development of Protestant Dogmatic has been influenced by Calvin, Hooker, and Schleiermacher.

3. What lines of dogmatic inquiry have been mainly pursued in this country during the latter half of the century? Why have those lines been followed?

4. Give some account of the theological views of *any two* of the following authors: Coleridge, Whately, Thomas Arnold, Baden-Powell, Jowett, and James Martineau.

### B. CHRISTOLOGY.

1. Give a brief *résumé* of recent thought on the doctrine of Christ's Pre-existence.
2. State and examine (a) Harnack's view as to the Virgin-Birth, and (b) Keim's view as to the Resurrection.
3. Give what you consider a comprehensive idea of Christ's Priesthood.
4. What objections have been taken to the ordinary distribution of Christ's mediatorial functions? Examine them.

### C. DOCTRINE OF THE CHURCH AND SACRAMENTS.

1. Explain the New Testament conception of the Church; and trace generally its transformations in patristic, mediæval, and modern doctrine.
2. Is the right of Biblical Criticism reconcilable with the authority of Scripture? Discuss the question.
3. Relate to and differentiate from each other the ministry of the Word and that of the Sacraments.
4. Write notes on the views of Paschasius Radbertus, Ratramnus, Berengarius, Gregory the Great, Melanethon, and Calvin, regarding the Sacrament of the Lord's Supper.

### BIBLICAL CRITICISM.

THURSDAY, 28th March 1901.—10 to 1 o'clock.

1. Discuss, critically, John vii. 8:—

T.R. *ἐπεὶς ἀνάβητε εἰς τὴν ἑορτὴν ταύτην· ἐγὼ οὐκ ἀναβαίνω εἰς τὴν ἑορτὴν ταύτην, ὅτι ὁ καιρὸς ὁ ἐμὸς οὐκ ἔστι πεπληρωμένος.*

οὐκ BLTXΓΔΛ, etc.; f q Vulg *codd.* aliq. Syrr (Pesh-Harel-Hier) Theb. Goth.; Bas.

οὐκ sDKMΠ *minusc.* *punc.*; Latt (Vet *codd.* *plur.* Vulg)

Memph. Arm. Aeth. (*nihil probat* Syr-Cur.); Porphyr. *ap.* Hieron. Epiph. Chrys. Cyr-Alex.

Explain the contractions and name the Greek MSS. quoted.

2. Give an outline of the history of the Textual Criticism of the New Testament from Lachmann to the present time.

3. What growth was there in the early Church in definiteness of opinion regarding the position of the New Testament writings? Point out the influences which affected it.

4. Show, by reference to representative writers or documents, what views were held in regard to the contents of the Canon at Alexandria, Rome, and Carthage respectively, at the end of the second century.

5. Discuss the destination of the epistle to the Galatians.

6. State and examine the objections which have been adduced to the Pauline authorship of Ephesians, *or* the Pastoral Epistles.

7. Discuss the evidence of the Fourth Gospel itself regarding the personality of its author.

8. Sketch the history of opinion with regard to the authorship of the Fourth Gospel, and examine the views of Baur *or* Wendt *or* Harnack.

9. (1) Carefully explain the character of each of the various gifts of the spirit:—

ὃ μὲν γὰρ διὰ τοῦ πνεύματος δίδοται λόγος σοφίας, ἄλλω δὲ λόγος γνώσεως, κατὰ τὸ αὐτὸ πνεῦμα· ἑτέρω δὲ πίστις, ἐν τῷ αὐτῷ πνεύματι· ἄλλω δὲ χαρίσματα ἰαμάτων, ἐν τῷ αὐτῷ πνεύματι· ἄλλω δὲ ἐνεργήματα δυνάμεων, ἄλλω δὲ προφητεία, ἄλλω δὲ διακρίσεις πνευμάτων, ἑτέρω δὲ γένη γλωσσῶν, ἄλλω δὲ ἐρμηνεία γλωσσῶν· πάντα δὲ ταῦτα ἐνεργεῖ τὸ ἐν καὶ τὸ αὐτὸ πνεῦμα, διαιροῦν ἰδίᾳ ἐκάστῳ καθὼς βούλεται.

(2) Translate, with exegetical notes:—

Διὸ οὐκ ἐκκακοῦμεν· ἀλλ' εἰ καὶ ὁ ἔξω ἡμῶν ἄνθρωπος διαφθείρεται, ἀλλ' ὁ ἔσωθεν ἀνακαινοῦται ἡμέρα καὶ ἡμέρα. τὸ γὰρ

παραντίκα ἐλαφρὸν τῆς θλίψεως ἡμῶν καθ' ὑπερβολὴν εἰς ὑπερβολὴν αἰώνιον βάρος δόξης κατεργάζεται ἡμῖν, μὴ σκοπούντων ἡμῶν τὰ βλεπόμενα, ἀλλὰ τὰ μὴ βλεπόμενα· τὰ γὰρ βλεπόμενα, πρῶτον καιρὰ· τὰ δὲ μὴ βλεπόμενα, αἰώνια.

10. (1) Write exegetical notes on:—

(a) Σοφίαν δὲ λαλοῦμεν ἐν τοῖς τελείοις· σοφίαν δὲ οὐ τοῦ αἰῶνος τούτου, οὐδὲ τῶν ἀρχόντων τοῦ αἰῶνος τούτου τῶν καταργουμένων.

(b) Ψυχικὸς δὲ ἄνθρωπος οὐ δέχεται τὰ τοῦ πνεύματος τοῦ Θεοῦ· μωρία γὰρ αὐτῷ ἐστὶ, καὶ οὐ δύναται γινῶναι, ὅτι πνευματικῶς ἀνακρίνεται.

(c) καὶ πάντες τὸ αὐτὸ πόμα πνευματικὸν ἔπιον· ἔπιον γὰρ ἐκ πνευματικῆς ἀκολουθοῦσης πέτρας· ἡ δὲ πέτρα ἦν ὁ Χριστός.

(2) Write historical notes on:—

(a) Πάντα μοι ἔξεστιν, ἀλλ' οὐ πάντα συμφέρει· πάντα μοι ἔξεστιν, ἀλλ' οὐ πάντα οἰκοδομεῖ.

(b) Οὐ γὰρ θέλομεν ἡμᾶς ἀγνοεῖν, ἀδελφοί, ὑπὲρ τῆς θλίψεως ἡμῶν τῆς γενομένης ἡμῖν ἐν τῇ Ἀσίᾳ, ὅτι καθ' ὑπερβολὴν ἐβαρύνθημεν ὑπὲρ δύναμιν, ὥστε ἔξαπορηθῆναι ἡμᾶς καὶ τοῦ ξῆν' ἀλλὰ αὐτοὶ ἐν ἑαυτοῖς τὸ ἀπόκριμα τοῦ θανάτου ἐσχέκομεν, ἵνα μὴ πεποιθότες ὦμεν ἐφ' ἑαυτοῖς, ἀλλ' ἐπὶ τῷ Θεῷ τῷ ἐγείροντι τοὺς νεκρούς.

(c) Γέγονα ἄφρων καυχώμενος· ἡμεῖς με ἠναγκάσατε. ἐγὼ γὰρ ὤφειλον ὑφ' ὑμῶν συνίστασθαι· οὐδὲν γὰρ ὑστέρησα τῶν ὑπὲρ λίαν ἀποστόλων, εἰ καὶ οὐδὲν εἰμι.

11. Translate and comment on:—

(a) εἰ δὲ τινες τῶν κλάδων ἐξεκλάσθησαν, σὺ δὲ ἀγριέλαιος ὢν ἐνεκεντρίσθης ἐν αὐτοῖς καὶ συγκοινωνῶς τῆς ρίζης καὶ τῆς πιότητος τῆς ἐλαίας ἐγένου, μὴ κατακαυχῶ τῶν κλάδων· εἰ δὲ κατακαυχᾶσαι, οὐ σὺ τὴν ρίζαν βιασάσεις ἀλλ' ἡ ρίζα σέ. Ἐρεῖς οὖν, “Ἐξεκλάσθησαν κλάδοι ἵνα ἐγὼ ἐγκεντρισθῶ.” Καλῶς· τῇ ἀπιστίᾳ ἐξεκλάσθησαν, σὺ δὲ τῇ πίστει ἔστηκας. μὴ ὑψηλὰ φρόνει, ἀλλὰ φοβοῦ· εἰ γὰρ ὁ Θεὸς τῶν κατὰ φύσιν κλάδων οὐκ ἐφείσατο, οἷδὲ σου φείσεται. Ἰδοὺ οὖν χρηστότητα καὶ ἀποτομίαν Θεοῦ· ἐπὶ μὲν τοὺς πεισόντας ἀποτομία· ἐπὶ δὲ σε χρηστότης, ἐὰν ἐπιμένῃς

τῇ χρηστότητι· ἐπεὶ καὶ σὺ ἐκκοπήσῃ. καὶ ἐκεῖνοι δὲ, ἐὰν μὴ ἐπιμένωσι τῇ ἀπιστίᾳ, ἐγκεντρισθήσονται· δυνατὸς γὰρ ἐστὶν ὁ Θεὸς πάλιν ἐγκεντρίσαι αὐτούς. εἰ γὰρ σὺ ἐκ τῆς κατὰ φύσιν ἐξεκόπης ἀγριελαίου καὶ παρὰ φύσιν ἐκεντρίσθης εἰς καλλιέλαιον, πόσῳ μᾶλλον οἱ τοὶ κατὰ φύσιν ἐγκεντρισθήσονται τῇ ἰδίᾳ ἐλαίᾳ;

(b) Οὐ γὰρ τολμῶμεν ἐγκρίναι ἢ συγκρίναι ἑαυτοὺς τισι τῶν ἑαυτοὺς συνιστανόντων, ἀλλὰ αὐτοὶ ἐν ἑαυτοῖς ἑαυτοὺς μετροῦντες, καὶ συγκρίνοντες ἑαυτοὺς ἑαυτοῖς οὐ συνιᾶσιν. ἡμεῖς δὲ οὐχὶ εἰς τὰ ἄμετρα καυχησόμεθα, ἀλλὰ κατὰ τὸ μέτρον τοῦ κανόνος οὗ ἐμέρισεν ἡμῖν ὁ Θεὸς μέτρον, ἐφικέσθαι ἄχρι καὶ ὑμῶν· οὐ γὰρ ὡς μὴ ἐφικνούμενοι εἰς ὑμᾶς ὑπερεκτείνομεν ἑαυτούς· ἄχρι γὰρ καὶ ὑμῶν ἐφθάσαμεν ἐν τῷ εὐαγγελίῳ τοῦ Χριστοῦ· οὐκ εἰς τὰ ἄμετρα καυχώμενοι ἐν ἀλλοτρίοις κόποις, ἐλπίδα δὲ ἔχοντες αὐξανομένης τῆς πίστεως ὑμῶν ἐν ὑμῖν μεγαλυνθῆναι κατὰ τὸν κανόνα ἡμῶν εἰς περισσεΐαν, εἰς τὰ ὑπερέκεινα ὑμῶν εὐαγγελίσασθαι, οὐκ ἐν ἀλλοτρίῳ κανόνι εἰς τὰ ἔτοιμα καυχήσασθαι.

## 12. Translate, with critical and exegetical notes:—

(a) ὧν οἱ πατέρες, καὶ ἐξ ὧν ὁ Χριστὸς τὸ κατὰ σάρκα, ὁ ὧν ἐπὶ πάντων Θεὸς εὐλογητὸς εἰς τοὺς αἰῶνας. ἀμήν.

(b) εἰ γὰρ σύμφυτοι γεγόναμεν τῷ ὁμοιώματι τοῦ θανάτου αὐτοῦ, ἀλλὰ καὶ τῆς ἀναστάσεως ἐσόμεθα.

(c) ἐν σαρκὶ γὰρ περιπατοῦντες οὐ κατὰ σάρκα στρατευσόμεθα,—τὰ γὰρ ὄπλα τῆς στρατείας ἡμῶν οὐ σαρκικὰ ἀλλὰ δυνατὰ τῷ θεῷ πρὸς καθαίρεσιν ὀχυρωμάτων,—λογισμοὺς καθαιροῦντες καὶ πᾶν ὕψωμα ἐπαιρόμενον κατὰ τῆς γνώσεως τοῦ θεοῦ, καὶ αἰχμαλωτίζοντες πᾶν νόημα εἰς τὴν ὑπακοὴν τοῦ Χριστοῦ, καὶ ἐν ἐτοιμῇ ἔχοντες ἐκδικῆσαι πᾶσαν παρακοήν, ὅταν πληρωθῇ ὑμῶν ἡ ὑπακοή.

(d) ἄχρι γὰρ τῆς σήμερον τὸ αὐτὸ κάλυμμα ἐπὶ τῇ ἀναγνώσει τῆς παλαιᾶς διαθήκης μένει μὴ ἀνακαλυπτόμενον, ὅτι ἐν Χριστῷ καταργεῖται· ἀλλ' ἕως σήμερον, ἡνίκα ἂν ἀναγινώσκηται Μωυσῆς κάλυμμα ἐπὶ τὴν καρδίαν αὐτῶν κείται· ἡνίκα δ' ἂν ἐπιστρέψῃ πρὸς Κύριον, περιαιρεῖται τὸ κάλυμμα.



Papers for Degrees in Law (LL.B. and B.L.).

SCOTS LAW.

MONDAY, 18th March 1901.—9 A.M. to 1 P.M.

(Three questions only in each group to be answered.)

I.

1. State briefly the law relating to the custody of lawful children.
2. Explain the doctrine of election between legal and testamentary provisions.
3. What is a curator *ad litem*? and what are his duties and powers?
4. Discuss a trust for creditors, particularly as to the rights of the truster.

II.

1. In cases of breach of contract, what rules obtain in regard to the measure of damages?
2. Show in what cases the tenant's part of a lease is or is not assignable.
3. What are the rules as to presentment of bills of exchange (a) for acceptance, (b) for payment?
4. State the law of trespass in Scotland, at common law and by statute.

III.

1. In shipping law, what is deviation? and what in law results from it?
2. How and in what particulars may a Memorandum of Association be altered?
3. Distinguish between cessio and sequestration in scope and operation. When and how may the former be superseded by the latter?

4. State the rules in the Sale of Goods Act as to the place, time, and mode of delivery of goods sold.

#### IV.

1. Explain the nature and operation of confusion.
2. Describe the preparation, nature, and uses of the Valuation Roll.
3. Distinguish between Debentures and Debenture Stock of a Company in their nature and effects. What classes of property may be charged in security of these in Scotland?
4. Sketch the law of bigamy.

### CONSTITUTIONAL LAW AND HISTORY.

#### FIRST PAPER.

MONDAY, 18th March 1901.—2 to 4 P.M.

[Six Questions at most to be answered.]

1. Describe the feudal system in England, as modified by William I.
2. What were the main provisions of (a) the Constitutions of Clarendon, and (b) the Assize of Arms?
3. Sketch the history of the Great Charter.
4. Who was Simon de Montfort, and what was his constitutional work?
5. Why is Edward I sometimes styled the English Justinian?
6. Describe (a) the anti-papal legislation of Edward III, and (b) the reforms of the Good Parliament.
7. What powers did Parliament acquire and exercise under Henry IV?
8. Trace the origin of the Star Chamber.
9. How far may Henry VIII be termed a constitutional monarch?

10. Describe and discuss Queen Elizabeth's ecclesiastical policy.
11. Sketch the history and give the substance of (a) the Apology and Satisfaction, (b) the Protestation, and (c) the Petition of Right.
12. Name, and indicate the objects of, the chief statutes of Charles II.
13. In what respects was the royal authority limited in 1689 and 1701?
14. Trace the origin and rise of the Cabinet system.
15. What is meant by the personal government of George III?
16. State the nature of the Reform Act of 1832.
17. State and discuss briefly any *three* cases of breach of Parliamentary privilege.

SECOND PAPER.

TUESDAY, 19th March 1901.—2 to 4 P.M.

[Six Questions at most to be answered.]

1. Sketch the early constitutional history of *one* of the thirteen North American Colonies.
2. Indicate the causes of the American Rebellion.
3. Describe the making of the U. S. A. Constitution.
4. Name and criticise the chief provisions of the U. S. A. Constitution.
5. Trace the history of the Constitutions of France from 1789 to 1875.
6. How is France now governed?
7. Name the landmarks of the constitutional history of Switzerland from 1291 to 1848.
8. How is the Swiss Confederation now governed?

9. Mention and criticise briefly the distinctive features of the Prussian Constitution, and discuss the views of the leading German School of political thought.

10. Sketch the constitutional origins of the German Empire from 1815 to 1871.

11. What are the great landmarks in the constitutional history of Hungary?

12. How is the common government of the dual monarchy of Austria-Hungary carried on?

13. Describe and discuss the constitution of *one* of—Sweden, Norway, Holland, Belgium.

14. Define the term “a political constitution,” and contrast such a form of government with an absolute monarchy.

15. Explain and discuss the different modes in which constitutions are framed, adopted, and amended.

16. Classify the different kinds of constitutions according to the measure of popular control which they insure.

## CIVIL LAW.

TUESDAY, 19th March 1901.—9 A.M. to 1 P.M.

### A.—HISTORY.

(All Candidates are expected to answer FIVE questions in this group.)

1. Discuss the origin and nature of the relation between patron and client. Estimate its political importance in the early history.

2. “Ita nexi soluti, cautumque in posterum ne neceerentur.” To what statute does Livy refer? Explain its scope, and mention any consequences that have been attributed to it.

3. Describe the formalities of *Mancipatio* in its original and later shapes. Mention some of the purposes—other than the conveyance of property—for which it could be employed.

4. "The Edict resulted in the establishment of a dual system of law." Give some illustrations from different departments of the law.

5. To what extent and in what ways was the Emperor a "source of law"?

6. Give some account of the Romano-barbarian Codes (*leges Romanae*).

7. Show by a comparison of the *Institutes* of Gaius and Justinian the extent to which the law of *Status* had been simplified in the interval. What were the main causes?

8. Indicate the date and scope of the following enactments: *Lex Aebutia*; *Lex Hortensia*; *Lex Canuleia*; *SC. Orphitianum*; *SC. Neronianum*.

### B.—INSTITUTES.

(The first question must be answered by all Candidates. Candidates for M.A. or B.L. should attempt SIX, and candidates for LL.B. FOUR of the remaining questions.)

1. Translate and comment on any *four* of the following passages:—

(a) Licet autem domino, qui solvendo non est, in testamento servum suum cum libertate heredem instituere.

(b) Ergo senatus non fecit quidem earum rerum usum fructum, sed per cautionem quasi usum fructum constituit.

(c) Mater vel avus maternus necesse non habent liberos suos aut heredes instituere aut exheredare, sed possunt eos omittere. . . . Sed aliud eis adminiculum servatur, quod paulo post vobis manifestum fiat.

(d) Si scriptum fuerit in instrumento promisisse aliquem, perinde habetur atque si interrogatione praecedente responsum sit.

(e) Haec actio dissimulatione aboletur: et ideo, si quis injuriam dereliquerit . . . , postea ex poenitentia remissam injuriam non poterit recollere.

2. Summarise the legislation of the early Empire regarding the manumission of slaves.

3. Trace the decay of *patria potestas* in the field of property and obligation.

4. What are the general principles that apply when things belonging to different owners are united or combined?

5. Give a brief account of the successive attempts to realise the idea of a Right in Security (*Jus pignoris*).

6. When was a testament said to be (a) *ruptum*, (b) *irritum*, (c) *inofficiosum*?

7. In intestate succession the *sui heredes* have the first claim. Explain precisely who compose that class, and who were ranked with them by the praetor and the constitutions.

8. Describe the various forms of the contract of *Locatio*. What are the rights and duties involved?

9. What is a *condictio indebiti*? What are the conditions of success in the action?

10. Explain shortly the nature of (1) *actio noxalis*; (2) *interdictum uti possidetis*; (3) *actio in factum*.

C.—DIGEST xviii. 1 and xix. 1.

(To be answered by Candidates for LL.B.).

1. Translate and explain *two* of the following:—

(a) Cum venderes fundum, non dixisti “ita ut optimus maximusque”: verum est, quod Quinto Mucio placebat, non liberum, sed qualis esset, fundum praestari oportere. Idem et in urbanis praediis dicendum est.

(b) Si quis fundum emerit, quasi per eum fundum eundi agendi jus non esset, et interdicto de itinere actuque victus sit, ex empto habebit actionem: licet enim stipulatio de evictione non committatur, quia non est de jure servitutis in rem actione pronuntiatum, tamen dicendum est ex empto actionem competere.



(c) *Quamvis supra diximus, eum in corpore consentiamus, de qualitate autem dissentiamus, emptionem esse, tamen venditor teneri debet, quanti interest non esse deceptum, etsi venditor quoque nesciet: veluti si mensas quasi citreas emat, quae non sunt.*

2. State precisely what the Roman law was—

(1) as to the passing of property in the *res vendita*;

(2) as to the sale of *res futurae*;

(3) as to the measure of damages for non-delivery.

## CONVEYANCING.

WEDNESDAY, 20th March 1901.—9 A.M. to 1 P.M.

*Any TWELVE Questions to be answered.*

1. Is the feudal relation of Superior and Vassal defeasible *inuito superiore*? If so, in what circumstances and with what qualifications?

2. Explain the theory, and give an historical account of the method, of completing a real right in Feudal Estate in Scotland. Contrast and comment upon the successive stages.

3. Treat of subinfeudation historically and practically.

4. Explain and give history of the *a me vel de me* holding.

5. What are the essential requisites of valid Missives of Sale of heritable estate?

6. State the order of Intestate Succession in Heritage, as regards Heirs at Law.

7. What is the effect of the birth of a nearer heir after the succession has opened, on the right of the heir in possession?

8. Explain what was the law before 1868, and what changes were made by the Titles to Land Consolidation (Scotland) Act, 1868, and subsequent Statutes, as regards the testamentary or *mortis causa* disposal of heritable estate.

9. Construe a destination to *A*, whom failing *B*, in a

testamentary disposition of (a) Heritable estate, (b) Moveable estate; state the reason for the distinction, and the effect in different contingencies that may occur.

10. Construe a destination occurring in an antenuptial Marriage Contract, by which the husband disposes his heritable estate to himself and his wife in conjunct fee and liferent for the wife's liferent use allenary and the heirs of the marriage in fee, and explain the relative rights of the parties.

11. In the event of a sole surviving Trustee dying, how is a title to the trust-estate made up in the case of (a) heritage, (b) moveables?

12. How far are heritable securities (a) heritable (b) moveable *quoad* the succession of the creditor?

13. What are the rights and powers as against the Trustee in sequestration, of (a) a disponent of the bankrupt, holding an unrecorded disposition (price having been paid to bankrupt), (b) an onerous assignee of the bankrupt holding an unintimated assignation of a personal bond, (c) an onerous holder of an unregistered transfer by the bankrupt of railway shares, (d) a person for whose behalf the bankrupt holds property under a latent trust, (e) a person who has conveyed property to the bankrupt by deed *ex facie* absolute, but truly in security of a debt? State reasons.

14. State how (a) the sale, (b) the mortgage of a ship is effected.

15. Treat of sealing and subscription of deeds historically.

## FORENSIC MEDICINE.

WEDNESDAY, 20th March 1901.—2 to 4 P.M.

1. How is the identity of the Male Skeleton determined, as contrasted with the Female?

2. What is the meaning of the terms "Vagitus Uterinus" and

“Vagitus Vaginalis”? What is their medico-legal significance?

3. Mention the chief peculiarities connected with death from Overlaying. Under what circumstances might it form the subject of a Criminal charge?

4. State and contrast the medical and legal view of Insanity. What must be proved in order to establish the plea that a criminal is not responsible for his crime? and, if the plea is established, how is he dealt with?

## GENERAL JURISPRUDENCE.

THURSDAY, 21st March 1901.—9 to 11 A.M.

(Only SIX questions should be answered.)

1. Indicate the difficulties in the way of a satisfactory definition of Law, and criticise some of the definitions which have been offered.

2. By what agencies was Tribal Law chiefly created and developed? Illustrate.

3. In what respects may law and morality be said to be identical; in what respects may they be said to be distinct?

4. “After the subsidence of the barbarian invasions the notion of sovereignty that prevailed seems to have been two-fold—*tribe* sovereignty, and *universal* sovereignty.” Explain.

5. What is legal sovereignty? Is a legal sovereign discoverable in all political societies?

6. What is “Judge-made Law”? Compare it with Statute Law, and examine the objections which have been taken to it.

7. What is a Juristic Person? Were Juristic Persons known to Archaic Law?

8. Discuss the “objective theory of contract.”

9. On what different principles has it been suggested that Rights should be classified?

10. Is the theory of a Social Contract satisfactory either as an historical account of the origin of political society, or as a philosophical justification of political authority?

11. Has the theory of a Law of Nature been turned to any useful account?

12. Write a critical account of the theory of "natural rights" as it appeared in the seventeenth and eighteenth centuries.

13. "La propriété c'est le vol." Discuss.

## PUBLIC INTERNATIONAL LAW.

THURSDAY, 21st March 1901.—11.30 A.M. to 1.30 P.M.

[Only SIX Questions should be answered, of which one must be from the last three.]

1. Discuss either (a) the assertion that "Grotius" is the Father of International Law"; or (b) the Influence of Roman Law in the development of International Law.

2. Describe or examine the International authority exercised by the Popes in the Middle Ages. Has the Pope an International status at the present day?

3. Give some account of any two of the following:—The Hanseatic League; The First Armed Neutrality; The United Republic of the Ionian Islands; The Holy Alliance.

4. Indicate the legal disabilities of (a) China, (b) The South African Republic, 1884-1899.

5. What has been, and what is, the practice of riparian states in respect to navigation over International rivers?

6. Show that the "Imperium" of a state extends beyond its "Dominium."

7. "The essence of Intervention is illegality." Discuss.

8. For what purposes are Pacific Blockades employed? Are they a legal institution?

9. Examine the effects of War upon Treaties to which the Belligerents are parties.

10. Discuss briefly the following statement:—"the jingle *enemy ship, enemy goods; free ship, free goods*," does not convey a real antithesis."

11. How do the British Prize-Courts deal with *res ancepitis usus* brought in as Contraband?

12. Discuss the cases of the *Alabama* and the *Trent*.

13. Write a short note on *one* of the following:—The Law of Visit and Search, Analogues of Contraband, Right of Angary.

## COMMERCIAL AND POLITICAL ECONOMY AND MERCANTILE LAW.

*See papers under Faculty of Arts.*

## PRIVATE INTERNATIONAL LAW.

FRIDAY, 22nd March 1901.—9 to 11 A.M.

[NOTE.—Not more than FIVE Questions to be answered.]

1. How is a marriage contract affected by the domicile or domiciles of the spouses (*a*) at the date of the contract, (*b*) subsequently during the existence of the marriage?

2. Is Private International Law brought into operation in the causes of (*a*) separate jurisdictions, (*b*) territories judicially, but not politically, independent?

3. What is the International Law as to divorce *a vinculo*?

4. What law governs (*a*) the formalities of execution, and (*b*) the interpretation of the provisions in a Will conveying both heritable and moveable estate?

5. State the principles of the *lex loci contractus*, with examples.

6. Distinguish personal and impersonal actions as regards

jurisdiction and the recognition or enforcement of the judgments obtained in them.

7. Define and illustrate Nationality, Expatriation, Naturalisation.

8. Explain and criticise the maxims "*Mobilia non habent situm*," "*Mobilia sequuntur personam*."

9. *A* in a foreign country enters into two contracts of loan of money to *B*, the money in both cases to be paid and repaid in that country; the one contract being constituted by a deed executed with all the formalities required by the local law but not with the formalities required by the law of Scotland: the other contract being constituted by parole only, the local law not requiring contracts of loan to be reduced to writing. *B* comes to reside in Scotland, and *A* sues him in Scotland on both contracts. Which law regulates the means of proof, and what proof would the the Scottish Courts admit in each of the supposed cases?

## PROCEDURE AND EVIDENCE.

FRIDAY, 22nd March 1901.—12 to 2 P.M.

1. What is jurisdiction *ratione rei sitae*? Discuss the application and limits of the principle.

2. To what extent have the civil courts jurisdiction in ecclesiastical causes?

3. What is the value of an action and how is it determined? When can the Court of Session entertain an action the value of which is under £25?

4. When may a married woman sue without consent of her husband? When is a husband who concurs liable in expenses?

5. In what actions is it competent to arrest on the dependence and when is it incompetent? What does the diligence cover?



6. How and to whom are *curators ad litem* appointed?
7. What is conjunct probation, and when is it allowed?
8. To what extent has the Sheriff jurisdiction in actions relating to heritage?
9. When is it competent to lead evidence of character?
10. Of what classes of fact does the Court take judicial notice?

## Examination Papers for Degrees of M.B. and CH.B.

### FIRST PROFESSIONAL EXAMINATION.

### CHEMISTRY.

MONDAY, 16th July 1900.—10 to 12 o'clock.

N.B.—Express your meaning in words, and also by means of equations whenever possible.

1. Give three examples of the oxidising action of nitric acid, stating in each case the conditions under which the action takes place, and giving equations.
2. What substances are produced when each of the following is heated by itself? (*a*) Calcium carbonate, (*b*) Ferrous carbonate, (*c*) Sodium hydrogen carbonate, (*d*) Ammonium hydrogen carbonate, (*e*) Potassium ferrocyanide, (*f*) Ammonium nitrate, (*g*) Ammonium sulphate, (*h*) Urea, (*j*) Calcium acetate, (*k*) Calcium oxalate? Give equations.
3. What is the formula of oxalic acid? What is produced when oxalic acid is heated, (*a*) with concentrated sulphuric acid, (*b*) with glycerine?
4. How could you distinguish, by one chemical test in each case, between (*a*) Magnesium chloride and zinc chloride, (*b*)

Stannous chloride and lead chloride, (c) Ferric chloride and aluminium chloride, (d) Sodium borate and sodium oxalate.

5. What volume, in litres, of carbonic oxide can be obtained from 100 grams of sodium formate by the action of concentrated sulphuric acid? The temperature and pressure are to be assumed to be normal, and the calculation is to be carried to two figures after the decimal point.

(H=1, C=12, O=16, Na=23. Two grams of Hydrogen occupy, at normal temperature and pressure, 22.33 litres.)

MONDAY, 25th March 1901.—10 to 12 o'clock.

N.B.—Express your meaning in words, and also by means of equations whenever possible.

1. Starting from metallic Mercury how may the following compounds be prepared? (a) Mercurous nitrate, (b) Mercurous sulphate, (c) Mercuric iodide, (d) Mercuric cyanide.

2. How is Calcium carbide prepared? What is the action of water on it?

3. How is Bleaching powder prepared? How does it behave when it is—(a) Treated with cold water? (b) Heated with water? (c) Heated with aqueous solution of Potassium carbonate? (d) Heated with Alcohol?

4. How do the following substances behave when heated?—(a) Crystallised Oxalic acid, (b) Ammonium acetate, (c) Benzoic acid, (d) Ammonium cyanate, (e) Potassium ferrocyanide.

5. How is Carbonic oxide prepared from Sodium formate? What volume of Carbonic oxide (in litres measured at 0°C. temperature and 760 mm. pressure) can be obtained from 10 grams of Sodium formate?

Carry the calculation to two figures after the decimal point.

(H=1, C=12, O=16, Na=23. Two grams of hydrogen occupy, at 0°C. temperature and 760 mm. pressure, 22.33 litres.)

PHYSICS.

MONDAY, 16th July 1900.—1 to 3 o'clock.

[FOUR Questions only to be attempted.]

1. Explain the meaning of the terms:—mass, acceleration and force. What is the relation among them?

Two masses which are as two to three are acted upon by forces which are as three to four; compare the accelerations.

2. Explain fully the rise of water in a capillary tube. Give the experimental justification of each of your statements.

3. What is meant by resonance? Give examples of its practical employment.

Show how it enters into the production of a note by an organ-pipe when blown.

4. Explain how to find the position of the image of an object seen through a bi-concave lens. Trace, on your diagram, the paths of the rays from one point of the object to the eye.

A short-sighted eye cannot see distinctly an object further away than twelve centimetres. Find the focal length of a lens which will just enable the eye to see the object distinctly at a distance of half a metre.

5. Describe the phenomena of induction in electrostatics and in magnetism, showing clearly wherein they are similar and wherein they are dissimilar.

6. Enumerate the various effects of an electric current flowing in a circuit, and show how each may be used to measure the strength of the current.

MONDAY, 25th March 1901.—1 to 3 o'clock.

[FOUR Questions only to be attempted.]

1. Distinguish carefully between weight and mass. Explain why a given body weighs less at the equator than at localities in

higher latitudes. By what form of experiment is this fact best demonstrated?

2. Describe and explain a mercury barometer. State what effect would be produced if a small piece of iron wire were introduced into the mercury column, and give your reasons.

What is an aneroid barometer, and how can it be used to show heights above sea-level?

3. A reservoir of fresh water at  $10^{\circ}\text{C}$ . is exposed to the steady cooling influence of the air above. Explain what thermal and volume changes occur throughout the mass as the water is gradually cooled until a layer of ice forms over the surface.

The reservoir is 60 feet long by 20 broad. How much heat must be abstracted from it during the formation of a sheet of ice one inch thick? (A cubic foot of ice weighs 58 lbs.)

4. Define the frequency, speed, and wave-length of a periodic disturbance. Find the relation connecting these quantities.

The air in a closed organ pipe vibrates 500 times per second. The speed of sound being 300 metres per second, find the length of the pipe.

5. Give the laws of simple refraction, and explain the term *critical angle*.

Show how to demonstrate the existence of this angle in the case of water, and mention some practical application depending on its existence.

6. State the fundamental facts of electromagnetism and magneto-electricity, and show how they may be demonstrated. Describe any form of apparatus in which both classes of phenomena are met with.

## ELEMENTARY ZOOLOGY.

TUESDAY, 17th July 1900.—10 to 12 o'clock.

1. Compare and contrast the nervous systems and sense organs of *Hirudo*, *Blatta* (Cockroach), and *Rana*.

2. Enumerate any groups of aquatic Mammals which are known to you, and explain how their structure is adapted to their mode of life.

3. What is the "notochord"? describe its development, and state how far it persists in adult members of the groups which possess it.

4. Where are the following to be found in a wild condition:—lion, tiger, elephant, sloth, kangaroo, opossum, orang-utan, lemurs, emeu, gorilla, bats? In what respects is the sloth highly specialized?

5. Contrast the forelimb of *Archæopteryx* with that of the Pigeon (*Columba*). How may the differences be accounted for?

TUESDAY, 26th March 1901.—10 to 12 o'clock.

1. Compare and contrast the renal organs of a marine Worm, a Snail, a Tadpole, and an adult Frog.

2. Give a short account of the Primates, paying special attention to the teeth, habits, and distribution.

3. Briefly explain the following terms:—*nematocyst*, *nauplius*, *pleurobranch*, *amnion*, *polar body*, *variation*, *atarism* (reversion), *protective colouration*.

4. Indicate the chief differences seen in the very early development (from fertilisation onwards) in one of the lower vertebrates, *e.g.* a skate, and in a mammal, *e.g.* the rabbit.

## ELEMENTARY BOTANY.

TUESDAY, 17th July 1900.—1 to 3 P.M.

*Four Questions only to be attempted.**Illustrate your answers by Drawings.*

1. Give an account of the process of pollination in Cruciferae, Leguminosae, Orchideae, and Gramineae.
2. Describe the sexual organs in a green alga, a moss, and a fern. What is their position upon the plant?
3. What structural arrangements are there in the leaf controlling the amount of water in a plant? Describe them and indicate how they act.
4. The gametophyte decreases in conspicuousness from the Bryophyte to the Angiospermae. Explain and illustrate this statement.
5. What characters would you look for to enable you to distinguish a plant which has grown submerged in water from one which has grown upon a desert plain? How do you explain the differences observable in the plants?

TUESDAY, 26th March 1901.—1 to 3 P.M.

*Four Questions only to be attempted.**Illustrate your answers by Drawings.*

1. What is chlorophyll? What are the conditions under which it is formed in plants? What is its function?
2. In what important characters do the Gymnosperms (*a*) resemble, (*b*) differ from, the Angiosperms?
3. Explain the meaning of the term Symbiosis, and describe two illustrative examples.
4. Describe the vascular system of a fern, and indicate the nature of the functions discharged by the several constituent parts or tissues.
5. Illustrate by the description of three examples the methods of pollination in Spermophyta.



*SECOND PROFESSIONAL EXAMINATION.*

*ANATOMY.*

*THURSDAY, 19th July 1900.—10 to 12 o'clock.*

1. Into what parts is the male Urethra divided? State the course and relations of each division. Contrast with it the female urethra.

2. Describe the origin and insertion of the Diaphragm. What openings occur in it and what objects do they transmit? Name and state the position of the viscera in relation to its two surfaces.

3. What forms of Cartilage do you find in the human body? Discriminate between their structural characters.

4. Give the attachments and relations at the Knee of the tendons of the following muscles—sartorius, gracilis, semitendinosus, semimembranosus, biceps flexor cruris.

*WEDNESDAY, 27th March 1901.—10 to 12 o'clock.*

1. Describe the Annular ligaments of the Ankle Joint. Enumerate and describe the relations of the various structures which pass under each ligament.

2. Give the origin, course, and relations of the Ulnar Artery in the forearm. Describe the dissection necessary to expose it in this situation. Name its branches in their order of origin.

3. Describe the arrangement of the membranes within the cavity of the Cranium. State the structural characters of each membrane.

4. Enumerate the nerves which enter into the formation of each of the five plexuses formed by the anterior divisions of the Spinal Nerves. State the position of each plexus.

## PHYSIOLOGY.

THURSDAY, 19th July 1900.—1 to 3 o'clock.

*[All FOUR Questions to be attempted.]*

1. Describe the structure of the Kidney. What views have been held regarding the part played by the several portions of the Uriniferous tubes in the secretion of the urinary constituents?

2. What reason is there to believe that coloured Blood Corpuscles are being continually destroyed and renewed? What organs are regarded as being especially concerned with such destruction and renewal? Give the evidence upon which your reply is based.

3. Describe the structure of the Olfactory mucous membrane and the manner in which its cells are connected with the brain. What parts of the cerebral cortex are related to the several organs of special sense? Illustrate your answer by a diagram.

4. Describe the digestive changes which occur when a meal of ordinary mixed food is taken into the stomach.

What further changes must occur in the products of digestion before they can be assimilated by the tissues?

WEDNESDAY, 27th March 1901.—1 to 3 o'clock.

*[All FOUR Questions to be attempted.]*

1. By what methods is the course of nerve tracts investigated? Trace the course (*a*) of the fibres of the posterior roots of the spinal nerves within the central nervous system; and (*b*) of the fibres connecting the Rolandic area of the cerebral cortex with the grey matter of the cord.

2. What is the relationship between the pressure in the left ventricle and in the aorta at different periods of the cardiac cycle? By what method is this relationship determined?

How do you account for the negative pressure which occurs at a certain moment of the cardiac diastole?

3. What is the nature of a voluntary muscular contraction? What effect does muscular work produce upon the egesta? (Give evidence in support of your statements.)

4. Describe the structure of the thyroid gland. What effects result (a) from deprivation of the thyroid; (b) from feeding with thyroid substance?

## MATERIA MEDICA.

FRIDAY, 20th July 1900.—10 to 12 o'clock.

1. In what forms is *Sulphuric Acid* used in medicine? What are their doses? Describe the action of the acid, when given in medicinal doses, on (1) the alimentary canal and (2) the blood.

2. Describe the effects which are likely to be produced by excess in the medicinal administration of each of the following:—(1) *Arsenious Acid*, (2) *Potassium Iodide*, (3) *Belladonna*, (4) *Santonin*.

3. What is *Ipecacuanha*? Name its chief constituents. Explain how it produces emesis; in what doses and under what circumstances is it employed for this purpose?

4. What is understood by the term *Counter-Irritation*? In what forms is *Cantharides* used as a counter-irritant? What risks attend its use?

5. What are the official preparations of the *Thyroid Gland*? In what diseases are they used and in what doses?

THURSDAY, 28th March 1901.—10 to 12 o'clock.

1. How is *Bromide of Potassium* prepared? Describe its physical properties. Give an account of its pharmacological action. What results follow its administration in excess?

2. What is meant by each of the following terms:—(a) A *Gum-resin*, (b) a *Balsam*, (c) a *Mucilage*, (d) an *Alkaloid*, (e) a *Stearoptene*? Give an official example of each.

3. What are the distinguishing physical and sensible characters of *Salicin*, *Salicylic acid*, *Salicylate of Sodium*, and *Salol*? How is *Salicylic acid* related chemically to *Salicin*? What are the chief therapeutic uses of *Salicin*? What are its doses?

4. State three methods by which *blood-pressure* may be reduced by medicinal substances, and illustrate your answer by examples.

5. What preparations are obtained from *Colocynth Pulp*? Give the dose of each. Describe the action and uses of *Colocynth*.

### THIRD PROFESSIONAL EXAMINATION.

#### PATHOLOGY.

SATURDAY, 21st July 1900.—10 to 12 o'clock.

1. *Abscess of the Liver*.—Give a short account of the Etiology and Pathology of the various forms of abscess of the Liver.

2. *Filaria*.—Enumerate the species of *Filaria* met with in man. Give an account of the life-history of the most important of these, and describe, briefly, the pathological conditions associated with their presence in the body.

3. *A burn involving the subcutaneous tissue*.—Describe the changes that take place at and around this burn from the time of its infliction to complete cicatrisation.

4. Describe the cultural and microscopic characters of the *Pneumococcus*. Mention the different pathological conditions under which it has been found, and describe any other organisms that closely resemble it.

FRIDAY, 29th March 1901.—10 to 12 o'clock.

1. A large hæmorrhage having occurred into the peritoneal cavity, the blood has been for the most part, but not entirely, absorbed.

Describe fully the processes by which the absorption is effected, and the changes which may occur in (*a*) the residue of blood, (*b*) the peritoneum, and (*c*) any other tissues or organs.

2. Write what you know about the Diphtheria bacillus, and its local and general effects upon the human body.

3. Describe fully the parasites causing (1) Ankylostomiasis and (2) Hydatids of the Liver, and give a short account of the lesions they produce.

4. Describe the changes in the cerebral arteries attributable to syphilis, and indicate the results which may follow upon them.

## FORENSIC MEDICINE.

SATURDAY, 21st July 1900.—1 to 2 o'clock.

1. Two men quarrel in the public street, and in the scuffle, one falls heavily on the back of his head. He is taken to a Hospital and dies in twenty-four hours. What, in all probability, is the cause of death, and what lesions would you expect to find on dissection? What duties of a medico-legal nature should the House Surgeon specially attend to?

2. A dead body is found suspended by a rope from a rafter in an out-house. What appearances would justify you in certifying that it was a case of foul play?

3. A pregnant young woman is found dead under suspicious circumstances. How would you determine the cause of death; and, if it be due to Poisoning, what substances might be found in the Stomach?

FRIDAY, 29th March 1901.—1 to 2 o'clock.

1. What do you understand by the term *MALUM REGIMEN*? Illustrate its meaning with reference to (a) The patient, and (b) The medical attendant.

2. Mention various ways in which Arsenic might accidentally be introduced into the body.

(a) In each case state the symptoms which should excite the suspicion of the medical attendant.

(b) Give the process for the detection of the Poison.

3. A woman with an infant goes voluntarily to an asylum and urgently requests to be admitted, as she is unable to control herself.

(a) What is the form of Insanity from which she suffers?

(b) What is the nature of her delusions?

(c) State the early symptoms which should put the medical man on his guard should he be consulted.

(d) How might the case become the subject of a criminal inquiry?

## PUBLIC HEALTH.

SATURDAY, 21st July 1900.—2 to 3 o'clock.

### I.—*Infantile Mortality.*

What is meant by the term *Infantile Mortality*? What diseases are chiefly responsible for causing a high *Infantile Mortality-rate*?

### II.—*Small-Pox.*

A case of *Small-pox* occurs in the family of a working-man. What are the duties which immediately devolve upon

(a) the Medical Attendant,

(b) the Health Authority of the District?



**III.—Infectious Diseases Hospital Accommodation.**

How many patients can be accommodated in a Ward of an Infectious Diseases Hospital with the following measurements—

Length, 40 feet

Breadth, 25 „

Height, 15 „?

FRIDAY, 29th March 1901.—2 to 3 o'clock.

**1. Disinfection of Stools in Enteric Fever.**

State in each case as regards (1) Milk of Lime, (2) Permanganate of Potassium, (3) Carbolic Acid, (4) Corrosive Sublimate—

(a) The method of use and the amount necessary.

(b) If in solution, the strength and amount of solution required.

**2. Ventilation.**

State the amount of cubic space required per head in

(1) A Board School (Juvenile Department).

(2) A common lodging-house.

(3) An ordinary bedroom.

How often is it practicable to renew the air per hour in each case during winter? State generally how this might be done.

**3. Climate.**

Give the distinctive characters of

(a) An Insular Climate.

(b) A Continental Climate.

State in each case to what these are due.

**FINAL PROFESSIONAL EXAMINATION.**

**MEDICINE.**

MONDAY, 18th June 1900.—10 A.M. to 12 NOON.

(Only THREE Questions to be answered.)

**1. Describe the phenomena of an attack of Angina Pectoris,**

and indicate the conditions, functional and organic, which may produce such an attack.

2. Describe the causes, morbid anatomy, symptoms, and course of Chronic Interstitial Nephritis; state what morbid conditions in other organs are usually associated with it; indicate the modes in which the disease may cause death; and give its treatment, with a prescription.

3. Describe the causes, morbid anatomy, symptoms, and course of Acute Myelitis affecting the cord in the middle of the dorsal (thoracic) region; and give the treatment of such a case.

4. Give the etiology and pathology of Malarial Fever; enumerate the varieties of this fever, and the other effects which the poison is capable of producing; describe an attack of any one of the varieties of Intermittent Fever; and lay down directions for the prophylaxis and treatment of Malarial infection.

## MIDWIFERY.

MONDAY, 18th June 1900.—1 to 3 P.M.

(After answering QUESTION I. the Candidate will answer any TWO of the three Obstetric questions.)

### I.—Ovarian Tumours.

1. Describe the varieties—

(a) of Solid, (b) of Cystic Ovarian Tumours.

2. Give the symptoms and diagnosis of the most common variety of Ovarian Cystoma.

3. Describe different methods of dealing with the pedicle in Ovariectomy.

### II.—Hyperemesis Gravidarum.

1. Give the possible causes.

2. Give the diagnosis and dangers.

3. Give the treatment.

**III.** *The Forceps.*

1. Give indications for their use.
2. Describe the curves and modes of action.
3. Indicate the dangers during extraction, and show how these may be avoided.

**IV.**—*Choice of a Wet-Nurse.*

1. What are the conditions that make the services of a Wet-nurse desirable?
2. What circumstances would guide you in your selection or rejection of an applicant?
3. What directions would you give the nurse as regards her own diet, and the feeding of the infant?

**SURGERY.**

TUESDAY, 19th June 1900.—10 A.M. to 12 NOON.

(Only THREE Questions to be answered.)

1. Describe the appearances of the parts in tuberculous disease of the elbow-joint. Describe the treatment of the condition, (a) in the early stage; (b) in the advanced stage, including the preparation of the skin, the steps of the operation, and the after treatment.
2. Describe fully the treatment of a compound comminuted and depressed fracture of the skull.
3. Describe the operation of tracheotomy on a child suffering from diphtheria; mention the difficulties which may arise in the course of the operation, and state how you would deal with them. What are the points to be attended to in the after treatment?
4. State the symptoms of strangulated femoral hernia; describe the treatment in detail, including the method of dealing with the bowel when gangrenous.

## CLINICAL MEDICINE.

Examinations, written, oral and practical, on cases in wards of the Royal Infirmary.

## CLINICAL SURGERY.

Examinations, written and oral, on the Symptoms, Diagnosis, and treatment of Surgical Cases in the wards of the Royal Infirmary.

## FORENSIC MEDICINE AND PUBLIC HEALTH.

*The Papers in Forensic Medicine and in Public Health are printed under the Third Professional Examination.*

## Papers for Degrees in Music.

## FIRST PROFESSIONAL EXAMINATION.

## HARMONY.

MONDAY, 25th March 1901.—TIME: *Three hours.*

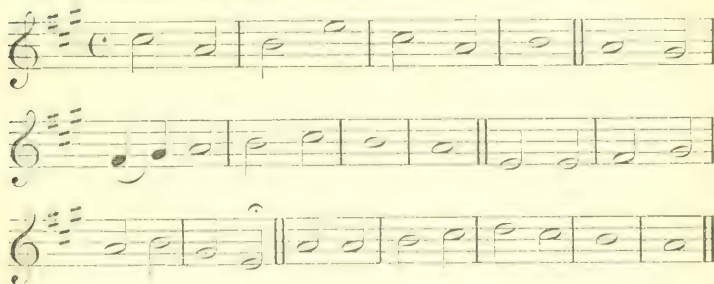
1. Add three parts to the following Figured Bass, and make the treble as melodious as possible :—

The musical notation shows a Figured Bass exercise. The top staff is in G major (one sharp) and 3/4 time. The bottom staff is in G minor (two flats). The figured bass is written above the notes. The top staff's figures are: 6, 7, 6, —, 6, 6 5 / 4 3, and 6# / 4 3. The bottom staff's figures are: 7, 6# / 5 3, 7# / 5 3, 8 / 5 3, 6 / 5 3, and 6 / 4 7 4.

$\frac{7}{5}$	—	$5^b$	$6^b$	7	$\frac{5}{3}$	$\frac{6}{4}$	$\frac{7}{4}$	$\frac{8}{3}$	$\frac{9}{1}$
4	2	3	3 $\frac{b}{2}$	4	3	4	4	3	1



2. Harmonise the following Chorale in four parts:—



3. Add a simple accompaniment to the following melody:—



4. Write an Imperfect Full Close in C sharp minor, a Plagal Close in G flat major, and a modulating Interrupted Close in A major.

5. Write in G minor the chord of the Neapolitan Sixth and the chord of the German Sixth, and resolve them.

6. Give examples of modulation from one key to another by

means of an Augmented Triad, and by means of an harmonically changing Chord of the Diminished Seventh.

7. Modulate gradually from F major to A major, and back to F major, in any way you like.

## COUNTERPOINT.

TUESDAY, 26th March 1901.—TIME: *Three hours.*

1. Point out the faults—with regard to compass, progression, and aesthetic quality—of the following melody, given as an example in strict style:—



2. Write a faultless melody in strict style.

3. State:—

(a) Where Hidden Consecutives have almost altogether to be avoided?

(b) Which are the most favourable and the most unfavourable conditions for Hidden Consecutives?

4. Add three counterpoints in the first species to the *Cantus firmus* No. 1 (four-part counterpoint), placing the latter first in the soprano, then in the bass, and lastly in the tenor, choosing in each case a suitable key.

5. Place the *C. F.* No. 1 in the highest part, and add to it a counterpoint of the fifth species as a middle part, and a counterpoint of the first species as a lowest part.

6. Place the *C. F.* No. 1 in the bass, and add to it a counterpoint of the first species as a middle part, and a counterpoint of the fourth species as a treble part.



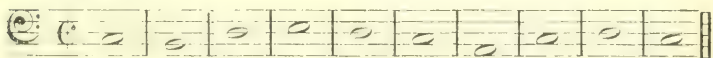
7. Place the *C. F.* No. 1 in the middle part, and add to it a counterpoint of the third species in the bass, and a counterpoint of the first species in the treble.

8. Write a counterpoint of the second species above the *C. F.* No. 2.

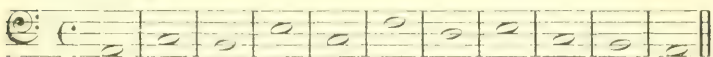
9. Write a counterpoint of the fourth species below the *C. F.* No. 2.

10. Write a counterpoint of the fifth species first above and afterwards below the *C. F.* No. 2.

*C.F.*, No. 1.



*C.F.*, No. 2.



## ELEMENTS OF MUSIC.

TUESDAY, 26th March 1901.—TIME: *Three hours.*

1. Draw up a table, systematically arranged, containing all the simple and compound time-measures in use.

2. Where lie the accents in  $\frac{4}{4}$ ,  $\frac{3}{4}$ ,  $\frac{1}{8}$ ,  $\frac{5}{4}$  and  $\frac{7}{8}$ ?

3. Add the rests necessary to complete bar (*a*); and the time signature of bar (*b*):—



4. Write a Breve and a Semidemisemiquaver note.

5. Write half a bar rest, a whole bar, two bars, and seven bars.
6. Differentiate Measure and Rhythm.
7. Write twelve Italian terms indicating movement (*tempo*), beginning with the slowest and gradually rising to the quickest.
8. By which Italian terms are gradual increase and decrease of speed, and gradual increase and decrease of loudness indicated? If more than one term is in use for the same meaning, mention all you know.
9. Illustrate Diatonic and Chromatic Semitones.
10. Write the G $\sharp$  major and E $\sharp$  minor Scales (all the forms of the latter).
11. What other names have the degrees of the scale than 1st, 2nd, 3rd, 4th, etc., degree?
12. Write the Chromatic Scale, up and down, in A $\flat$  major and in F minor.
13. Change the notes *c*, *f*, *d* $\sharp$  enharmonically in as many ways as you can.
14. How do you change a Major Interval into a Minor Diminished, and Augmented Interval?
15. What changes can a Perfect Interval undergo, and how are they brought about?
16. Write above *f* $\sharp$  a Diminished Third, a Major Seventh, an Augmented Fourth, and a Minor Ninth, and say how many tones and semitones (diatonic and chromatic) each of these intervals contains.
17. How many of the intervals used in music are consonant, and what distinction is made in the consonant intervals?
18. Transpose the passage on the blackboard from E to B major.
19. Define Tonality.
20. Explain the following words and phrases: Harmonic Series, Pentatonic Scale, *Diapason normal*, *Seconda volta*, Resolution, and *Volti subito*.

21. Name the old dances to be found in J. S. Bach's Suites and Partitas, and say in what measures they are.

22. Translate the following terms: *Timbre*, *Vorschlag*, *Nachschlag*, *Acciaccatura*, *Allegro assai*, *Pincé*, *Languissamment*, *Double croche*, *Appoggiatura*, *giocoso*, *sforzato*, *pesante*, *Barcarolle*, *ostinato*, and *Clavecin*.

23. Suppose you had to write in one bar eight times the semiquavers *e* followed by *g*. What could you do to lighten your labour?

24. How can you avoid writing a repeated bar twice?

25. What is the meaning of *sf.*, *mp.*, *fff.*, *ppp.*, *sost.*, *ten.*, and *m.d.*

## HISTORY OF MUSIC.

WEDNESDAY, 27th March 1901.—TIME: *Three hours.*

1. Can you recollect the three opinions that are held concerning the origin of the music of the early Christians?

2. In what ways can we divide the history of music?

3. Of which century are the earliest musical manuscripts? Have manuscripts of the time of St. Gregory come down to us?

4. Who is credited with the selection of four modes (scales) for the music of the Christian Church, and who with the addition of four more? By what epithets are the former and the latter four distinguished; and what became subsequently the number of modes?

5. What is meant by Organum, Discant, and Counterpoint? Is there another name for the thing called Organum?

6. What are Neumes?

7. Name, describe, and figure the early mensurable notes.

8. In which century did Counterpoint attain maturity, and in which century did the contrapuntal style reach its highest perfection?

9. Enumerate the leading schools of the 15th, 16th, and 17th centuries, and indicate the time at which they flourished.

10. To what schools did the following masters belong:—Legrenzi, Pierre de la Rue, Alessandro Scarlatti, Gilles Binchois, Costanzo Festa, Jean Mouton, Cipriano de Rore, Dunstable, Heinrich Schütz, Gombert, and Cesti.

11. Explain the following terms: Monophonic, Polyphonic, Monody, *Contrapunctus a mente*, and Madrigal.

12. Give short accounts of the lives and works of the following musicians: Franco of Cologne, Adam de la Hile, Orlando Lasso, John Bull, J. S. Bach, Auber, Rossini, and Mendelssohn.

13. Name the greatest dramatic composers of the seventeenth, eighteenth, and nineteenth centuries.

14. About what time began to flourish the orchestral symphony?

15. Who are the composers, and what are the nature, and the time of production, of the following works:—"Iphigénie en Aulide," "The Seasons," "Fra Diavolo," "Le Nozze di Figaro," "La Damnation de Faust," "La Serva Padrona," "Israel in Egypt," "Calm Sea and Prosperous Voyage," "The Naiads," and "Carmen."

16. Point out all the important changes brought about by the revolution prepared in the sixteenth and accomplished in the seventeenth century.

## FORM.

WEDNESDAY, 27th March 1901.

TIME—Three hours.

1. Describe the constitution of what is called a Regular Period.

2. Describe different forms of Irregular Periods.

3. How can Periods be extended?

4. What is meant by "overlapping" in connection with periods?

5. Analyse No. 6 of Schumann's *Album for the Young*. First, divide the whole into parts, indicating them by letters, repeated parts getting the same letters. Then analyse in detail these several parts, stating length and articulation of periods, nature of the subject-matter, and cadences and modulations.

6. Enumerate the principal features of the Sonata form and of the Rondo forms.

7. Analyse the first movement of Haydn's Sonata in E flat major  $\frac{3}{4}$ , and the Finale of Haydn's Sonata in E minor  $\frac{6}{8}$ . With regard to the analysis of the first movement, be particular about the material of the working-out division, and do not forget to state whence it is derived.

8. Answer the following questions about J. S. Bach's Fugue in G minor, No. 16, Part II., of the *Wohltemperirte Clavier* :—

(a) Is it tonal or real?

(b) What are the number of parts, and in what order do they enter?

(c) Where does the subject end? Write it down.

(d) What is the extent of the first Episode?

(e) Is the material of the Episode new or derived from what precedes?

(f) Are there any Stretti, and is there a Pedal? Copy what you find.

## SECOND PROFESSIONAL EXAMINATION.

### RHETORIC AND ENGLISH LITERATURE.

THURSDAY, 28th March 1901.—TIME: Three hours.

1. Name and form into separate groups the principal

dramatists, lyrical poets, and prose writers of the Elizabethan age.

2. Who were the chief literary lights of the second half of the seventeenth century, after the Restoration?

3. Give an account of the life and work of Edmund Spenser.

4. Characterise the prose styles of Addison, Gibbon, Macaulay, Carlyle, and Ruskin.

5. Compare the poetry of Tennyson and Browning, and of Wordsworth and Byron.

6. State the names of the authors, the approximate time of the production, and the subject-matter and form, of the following works:—"Pippa Passes," "Arcadia," "Sentimental Journey," "The Prelude," "The Golden Legend," "Peregrine Pickle," "Imaginary Conversations," "Lalla Rookh," "Leviathan," "The Deserted Village," "The Earthly Paradise," "Tale of a Tub," and "Douglas."

7. What is meant by 'the dramatic unities'?

8. Explain the following terms:—*Dimeter*, *Anacrusis*, *Allegory*, *Symbolism*, *Dactylic*, *Tribrach*, *Heroic Verse*, *Ballad Metre*, and *Elegiac Metre*.

9. Describe some of the more common kinds of verse, and the ways in which the metrical regularity is modified and interrupted.

10. Name the following kinds of verse, and point out any peculiarities that may strike you:—

"To praise men as good, and to take them for such,  
Is a grace, which no soul can meet out to a tittle."

"A heartful of desire, man's natural load."

"Great Nature spoke; observant man obey'd.  
Cities were built, societies were made."



"Black were her eyes as the berry that grows on the thorn by the wayside."

11. Describe the structure of the first stanza of No. 12, the first and second stanzas of No. 198, and the first stanza of No. 290 in the *Golden Treasury of the best Songs and Lyrical Poems*, and scan the verses carefully.

12. Set the words of the first stanza of No. 22 to a monotone rhythmical musical composition. The rhythm is to be artistically free, not mechanically measured by equal longs and shorts.

13. Examine Nos. 23-30, and say which of the poems are not suitable for musical composition, and to what extent others are. Give the reasons for your opinion.

14. Write a short expository essay either on Shakespeare's "The Winter's Tale," or on "Twelfth Night; or, What you Will," with special reference to its musical possibilities—its suitability as an opera, a play with music, or a symphonic poem.

## Benefactors of the University.

THE Revenues of the University were formerly scanty and very inadequate for the encouragement of the higher education and learning in the Scottish metropolis. Scholarships and Fellowships were unknown prior to those recently instituted, and the emoluments of several of the Chairs are still greatly inferior to those in many other Universities.

During the early period of its history, the University received a considerable number of small donations and bequests, chiefly for Bursaries. Notices of these will be found in the preceding pages, in the Histories of the University by Bower, Dalziel, and Grant, and in the Report of the Universities' Commissioners in 1830. A list of early Benefactors to the Library is given at p. 41.

By Act 1 & 2 Vict., cap. 55, the various sums of money mortified in the hands of the Town Council for the support of the University, amounting to £13,119, were discharged, and an annual payment of £2500 (since reduced to £2170), secured in terms of "The Edinburgh Corporation Stock Act, 1894," over the Common Good of the City, &c.

Within this century, but especially since 1860, many donations and bequests have been made by Benefactors of the University for the foundation of Fellowships, Scholarships, and Bursaries, for the endowment of Chairs, and for the erection of the New Buildings, including the "M'Ewan Hall," and the "Sir John Usher Institute of Public Health." As the University is still very inadequately endowed, much requires to be done that it may not fall behind the requirements of the age. Intending Benefactors are respectfully reminded that additional CHAIRS, LECTURESHIPS, LABORATORY EQUIPMENTS, LIBRARY ENDOWMENTS, SCHOLARSHIPS, BURSARIES, and FUNDS for RESEARCH, for GENERAL MAINTENANCE, and for BUILDING, are urgently required.

1. As regards the Library (which now contains about 208,000 printed volumes, and about 7500 MSS., many of which are of great value) the most pressing wants are :—(a) A fire-proof room in which to store the rare and valuable books of the fifteenth and sixteenth centuries, and the MSS. which are often consulted by scholars and authors from all parts. (b) A fund for the purchase of scientific and literary journals and of larger works of reference. These at present absorb 47 per cent. of the total sum available for all purchases for the Library, so that only about £670 is left for the purchase of new books. Under this head £25,000 at least are required. (c) Extensive structural alterations and new book-cases, which will cost at least £5000. The congestion which has arisen from the want of sufficient and safe accommodation for the Books and MSS. occasions much labour and inconvenience, and if the necessary improvements are not very soon accomplished, will make the efficient working of the Library a matter of serious difficulty. The only alternative, and far more desirable plan, would be the erection of a new suitable building for the Library by the gift of some benefactor.

2. The establishment of the Physical Laboratory, again, cannot much longer be delayed. Its construction and equipment will be a large undertaking, but the task must soon be faced if the scientific reputation of the University is to be maintained.

The names of Benefactors, if so desired, may be connected with the Benefactions they bestow. Such Benefactions may simply be conveyed to the “University of Edinburgh.” All necessary information will be gladly afforded by the Secretary of the University Court, the Secretary of Senatus, the Deans of the Faculties, or the University Librarian.

The following list includes the chief Benefactors of the present century, together with the purposes of their benefactions<sup>1</sup> :—

<sup>1</sup> An Association exists for the purpose of keeping the Public informed regarding the existing insufficiency of the Endowments of the University of Edinburgh, collecting funds, and appropriating them to the further extension and better endowment of the University, and to other purposes tending to promote the efficiency of the University as a seat of learning.

The Chancellor of the University is President of this Association; the Hon. Secretary is Sir Alexander Christison, Bart; and the Secretary is Robert G. Scott, Esq., W.S., 6 Hill Street, Edinburgh.

*(A.)—Founders of Bursaries in the present Century.*

- Rev. J. STUART, South Carolina—Founder of the Stuart Bursaries.
- Sir JOHN M'PHERSON, late Governor-General of India—Founder of the M'Pherson Bursary (now the Macpherson Scholarship).
- Rev. R. BLAIR, D.D.—Founder of the Blair Bursaries in Arts and Theology.
- J. STEWART HEPBURN, Esq. of Colquhalzie—Founder of three Theological Bursaries.
- JOHN JAMIESON, Esq., Edinburgh—Founder of the Jamieson Bursary.
- GEORGE PARKER BIDDER, Esq.—Founder of the Jardine Bursary.
- WILLIAM LENNIE, Esq., Teacher, Edinburgh—Founder of the Lennie Bursaries.
- JOHN BRUCE, Esq., Trinity Crescent, Edinburgh—Founder of the Bruce Bursaries.
- M'DIARMID TESTIMONIAL TRUSTEES—Founders of the M'Diarmid Bursary.
- W. PATRICK, Esq. of Roughwood—Founder of the Patrick Bursaries.
- JAMES GRAY, Esq. of Baadpark—Founder of the Gray Scholarship.
- EDINBURGH CAITHNESS ASSOCIATION—Founders of a Bursary.
- EDINBURGH GALLOWAY ASSOCIATION—Founders of a Bursary.
- AYRSHIRE CLUB—Founders of two Bursaries.
- PEEBLESHIRE SOCIETY—Founders of a Bursary.
- Dr ABERCROMBIE, Cape Town—Founder of a Bursary.
- Mrs MARGT. TYNDALL BRUCE of Falkland—Founder of Bursaries.
- TRUSTEES of FRANCIS J. SCOTT, Esq. of Mount Lodge, Portobello—Founders of two Bursaries.
- Miss HANNAH HARRISON of Lasswade—Founder of a Bursary.
- Miss MARY ETTLES of Inverness—Founder of three Bursaries, and the "Ettles Medical Scholarship."
- TRUSTEES of the Rev. JOHN SPENCE, Minister of Kinnaird—Founders of two Bursaries.
- JOHN ROBERTSON SIBBALD, M.D.—Founder of Five Bursaries.
- ARGYLLSHIRE, BUTE, and WESTERN ISLES ASSOCIATIONS—Founders of a Bursary.
- SUBSCRIBERS to MEMORIAL to ROBERT STEWART, Esq. of Ardvorlich—Founders of a Bursary.
- THE EDINBURGH BORDER COUNTIES ASSOCIATION—Founders of two Bursaries.
- THE RIGHT HON. THOMAS, EARL OF ZETLAND—Founder of the Orkney and Zetland Bursary.
- TRUSTEES of JAMES GRIERSON, of OGSCASTLE—Founders of the Grierson Bursaries.

- TRUSTEES OF Dr MACKIE, Leith—Founders of Mackie Bursaries.
- TRUSTEES OF J. CAIRNS, Esq., W.S.—Founders of the Cairns Bursary.
- TRUSTEES OF Mrs JOHNSTONE of Harthope, Moffat—Founders of the Johnstone of Harthope Bursary,
- TRUSTEES OF JAMES LAMBERT, Esq., Alloa—Founders of the Lambert Bursary.
- ROBERT MARSHALL, Esq., Merchant, Edinburgh—Founder of the Marshall Bursary.
- JOHN FOTHRINGHAM, Esq. of Heathpool—Founder of the Fotheringham and Forrest Bursaries.
- Right Hon. LAWRENCE, EARL OF ZETLAND—Founder of the Zetland Bursaries.
- ANDREW THOMSON, M.D.—Founder of Eight Bursaries in Arts, Divinity, Law, and Medicine.
- EDINBURGH EAST LOTHIAN ASSOCIATION—Founders of a Bursary in Arts.
- EDINBURGH UNIVERSITY ENDOWMENT ASSOCIATION—Donors of Bursaries in Arts.—Discontinued.
- Mrs ISABELLA WEBSTER—Founder of the Webster Bursaries in Divinity.
- Dr JOHN AITKEN CARLYLE—Founder of two Bursaries in the Faculty of Medicine.
- Mrs ELIZABETH MACKENZIE—Founder of the Mackenzie Bursaries.
- TRUSTEES OF Mrs BARBARA MACAULAY OR MYLNE—Founders of a Bursary in Divinity.
- TRUSTEES OF Rev. JOHN PATTERSON—Founders of a Bursary in Anglo-Saxon Grammar and Literature.
- THOMAS CARLYLE—Founder of the John Welsh Bursaries in Mathematics and Classics.
- Mrs HELEN ANDERSON or RONALD, Liverpool—Founder of the Anderson Bursaries.
- SUBSCRIBERS to Testimonial to W. MACKINNON, Esq. of Balinakill—Founders of the Mackinnon Bursaries.
- TRUSTEES OF JAMES WHITELAW—Founders of Whitelaw Bursaries.
- TRUSTEES OF WILLIAM RENTON, Esq.—Founders of a Bursary in Divinity, and one in Arts.
- Miss ISABELLA MACDOUGALL, Perth—Founder of the John and Isabella Macdougall Bursaries.
- ROBERT HUNTER, Esq., Dalhousie Chesters—Founder of two Bursaries in Divinity.
- ROBERT PILLANS NEWTON of Castlandhill and Drumcross—Founder of the Newton Bursaries.

PETER CAMPBELL MANN of Seaham Harbour, Durham—Founder of the Mann Bursaries.

CHARLES JARDINE of Thorlieshope—Founder of Bursaries in Arts.

ISAAC ANDERSON HENRY—Founder of the Anderson Henry Prize.

Mrs H. E. MORISON—Founder of the Mackenzie (Stornoway) Bursary.

DANIEL MACLAURIN, Esq.—Founder of the Maclaurin Bursary.

THOMAS LOCKERBY, Esq.—Founder of the Lockerby Bursary.

GEORGE COUSIN, Esq.—Founder of the "Bailie Cousin Bursary."

THOMAS HILL PATTISON, M.D.—Founder of the Pattison Prize in Clinical Surgery.

Major ROBERT ORR CRICHTON of Lynn—Founder of the Crichton Bursaries in the Faculty of Medicine.

Rev. THOMAS MAULE—Founder of Maule's Bursaries.

Mrs A. B. R. MILNER FOTHERGILL of Hayton Quarry—Founder of the Milner Fothergill Gold Medal in Therapeutics.

DONALD FRASER, M.D., London, and ASSOCIATION for the BETTER ENDOWMENT of the UNIVERSITY—Founders of the Donald Fraser Bursary in Experimental Physics.

SUBSCRIBERS TO MEMORIAL TO PROFESSOR KELLAND—Founders of the Kelland Memorial Prize.

GOVERNORS OF GEORGE HERIOT'S TRUST—Founders of Bursaries in Arts, Science, and Medicine.

Dr THOMAS CHARLES HOPE, late Professor of Chemistry—Founder of the Hope Prize (now two Hope Scholarships).

Mrs MARGARET TYNDALL BRUCE—Founder of Prize in Logic Class.

DANIEL ELLIS, Esq.—Founder of "The Ellis Prize" in the Faculty of Medicine.

JOHN EDWARD BAXTER, Esq., of Craigtay, bequeathed the reversion of his Estate for the purpose of founding Scholarships, etc.

Dr NEIL ARNOTT gave £1000 for Promoting the Study of Experimental Physics among the Medical Students of the University.

Rev. HEW SCOTT of Wester Anstruther—Founder of the Scott and Dunbar Prize in Greek.

JOHN WILSON, Esq. of South Bantaskine—Founder of the Robert Wilson Prize in Chemistry.

Mrs E. WIGHTMAN—Founder of the Wightman Prize in Clinical Medicine

JAMES GEORGE BEANEY, Esq.—Founder of the Beaney Prize.

ANDREW ROBERTSON CAMERON, M.D., of Richmond, New South Wales—Founder of the Cameron Prize.



JOHN M'COSH, M.D.—Founder of the M'Cosh Graduate's Bursary in Medicine.

Miss JANE MARIA M'MASTER, Edinburgh—Founder of the M'Cosh Medical Bursary.

Miss JANET M. BROWN, Edinburgh, £30 a year for the purpose of providing bursaries in the Faculty of Divinity.

(B.)—*Founders of Scholarships or Fellowships in the present Century.*

THE PITT CLUB—Founders of two Scholarships, one in Arts and one in Divinity.

JAMES MACKENZIE, Esq., W.S.—Founder of Mackenzie Scholarship.

ALEX. HENRY RHIND, Esq. of Sibster—Founder of the Rhind Scholarships and Bursaries.

Sir DAVID BAXTER, Bart., of Kilmaron—Founder of the Baxter Scholarships in Arts and Science.

Sir WILLIAM FETTES, Bart.—Founder of the Fettes Exhibitions.

JOHN MAXTON, Esq.—Founder of a Divinity Scholarship.

Miss ELIZABETH DRUMMOND—Founder of the Drummond Scholarship.

Mrs MARGARET TYNDALL BRUCE—Founder of three Scholarships.

JAMES GUTHRIE, Esq., of London—Founder of the Guthrie Fellowship.

SUBSCRIBERS to HAMILTON MEMORIAL FUND, and ASSOCIATION for the BETTER ENDOWMENT of the UNIVERSITY—Founders of a Philosophical Fellowship.

ASSOCIATION for the BETTER ENDOWMENT of the UNIVERSITY—Founders of a Classical Fellowship.

TRUSTEES of Dr J. H. GILCHRIST—Founders of three Scholarships for Natives of India.

JOHN ROBERTSON SIBBALD, M.D.—Founder of a Medical Scholarship.

Miss MARY BAXTER, of Balgavies—Founder of Scholarships.

SUBSCRIBERS to FALCONER MEMORIAL FUND—Founders of a Fellowship.

SUBSCRIBERS to SYME FELLOWSHIP—Founders of a Fellowship in the Medical Faculty.

SUBSCRIBERS to GOODSIR MEMORIAL FUND—Founders of a Fellowship in the Medical Faculty.

Rev. JOSEPH TAYLOR GOODSIR bequeathed £900 to Supplement the Goodsir Memorial Fund.

ROBERT A. GOODSIR, M.D., Edinburgh, bequeathed residue of his Estate, amounting to about £2000, to supplement the Goodsir Memorial Fund.

TRUSTEES of Mrs CHARLES MACLAREN—Founders of the Charles Maclaren Scholarship.

SUBSCRIBERS to GLOVER MEMORIAL FUND, and ASSOCIATION for the BETTER ENDOWMENT of the UNIVERSITY—Founders of the “Glover Divinity Scholarship.”

Mrs M. ARNOTT, Widow of NEIL ARNOTT, M.D.—Founder of the “Neil Arnott Scholarship for Experimental Physics.”

JOHN EDWARD BAXTER, Esq. of Craigtay, bequeathed the residue of his estate, out of which three Scholarships named after him have been founded by the University Endowment Association.

The Rev. DAVID AITKEN, D.D., formerly Minister of Minto—Founder of the Aitken Scholarship.

DAVID SKIRVING, Esq., of 13 Westbourne Park, London—Founder of the Skirving Scholarship for Moral Philosophy.

ANDREW THOMSON, M.D.—Founder of a Scholarship.

Misses KIDD of Woodhouse—Founders of the David Kidd Divinity Scholarship.

Dr R. H. GUNNING of Rio Janeiro—Founder of ten Prizes in the Faculty of Divinity, and of eleven Prizes in the Faculty of Medicine

Dr T. LECKIE—Founder of the Leckie-Mactier Scholarship.

SUBSCRIBERS TO MEMORIAL OF Dr COLDSTREAM—Founders of the Coldstream Memorial Medical Missionary Scholarship.

Mrs JAMES BUCHANAN—Founder of a Scholarship in Midwifery and Gynecology.

Dr ANDREW VANS DUNLOP, H.E.I.C.—Founder of the Vans Dunlop Scholarships in Arts, Law, and Medicine.

Misses STEVEN of Bellahouston—Founders of a Scholarship in Agriculture.

SUBSCRIBERS TO MEMORIAL OF Dr CHARLES MURCHISON—Founders of the “Charles Murchison Scholarship.”

Mrs MARY ANN SCOTT or THOMSON of Hawick—Founder of the James Scott Scholarship in Midwifery

ROBERT MACKAY-SMITH, Esq., Edinburgh—Founder of the Mackay-Smith Scholarships in Natural Philosophy and Chemistry.

Dr FREDERICK JOHN MOUAT—Founder of the Mouat Scholarship in Practice of Physic.

Dr JOHN STARK, Auchtermuchty—Founder of the Stark Scholarship in Clinical Medicine.

Mrs KIDD—Founder of “James Fairbairn’s Scholarship.”

Miss JANE JEFFREY—Founder of the Jeffrey Scholarships.

Dr A. H. FREELAND BARBOUR—Founder of the Freeland Barbour Fellowship.

Miss MATILDA JOHNSTON COBB—Founder of the Cobb Divinity Scholarship.

Mrs ELIZABETH MACKIE or TREVELYAN—Founder of Scholarships in Engineering and Mechanical and Useful Arts.

Mrs MUIRHEAD—Founder of Prize in Civil Law Class.

SUBSCRIBERS TO LORIMER MEMORIAL FUND AND ASSOCIATION FOR THE BETTER ENDOWMENT OF THE UNIVERSITY—Founders of the Lorimer Travelling Scholarship.

GEORGE SCOTT, Esq., Peckham, London—Founder of the Scott Travelling Scholarship, for purposes of Study or Research.

GOVERNORS OF GEORGE HERIOT'S TRUST—Founders of Fellowships in Arts and Pure Science.

Mrs E. CROZIER or NICHOL, Edinburgh—Founder of Scholarship in Natural Philosophy.

TRUSTEES OF THE EARL OF MORAY—Founders of "The Earl of Moray's Endowment of £20,000" for Original Research.

Misses MARGARET KEITH AYTOUN and ISABELLA AYTOUN—Founders of the Edmondstone Aytoun Fellowship.

Mrs JANE ALLAN, widow of the late John Allan, M.D., H.E.I.C.S.—Founder of Fellowship in the Faculty of Medicine.

J. M. HOULDSWORTH, Esq. of Ayr, and other Trustees—Founders of "The Houldsworth Scholarship for Research in Pharmacology."

Miss CHRISTIAN THOW of Craigmore, near Dundee—Founder of Scholarships in the Faculty of Law.

A number of Queen's Scholarships, each about £30 a year, for students proceeding to graduation in Arts or Science who intend to become schoolmasters, given by the educational authorities of the Church of Scotland and the Free Church.

(C.)—*Founders of New Chairs, Contributors of Endowments to existing Chairs, or of Money, &c., to the University Funds, Library, &c., within the present Century.*

General JOHN REID—Founder of the Theory of Music Chair, who also bequeathed money to the Funds of the University.

General Sir JOSEPH STRATON—Bequest to the University Funds.

Sir JAMES ERSKINE, of Torry, bequeathed Pictures, Bronzes, and Marbles to the University. [Lent to the National Gallery.]

Sir WILLIAM PULTENEY—Founder of the Chair of Agriculture.

Dr WILLIAM THOMSON—Founder of the Thomsonian Lectureship in Mineralogy.

Sir GEORGE BALLINGALL, Professor of Military Surgery—Presented his Library to the University.

Dr W. P. ALISON, Professor of the Theory of Medicine—Presented his Medical Books to the University.

JOHN MUIR, D.C.L., LL.D., Edinburgh—Founder of Sanskrit Chair.

Sir DAVID BAXTER, Bart., of Kilmaron—Founder of the Chair of Engineering.

DAVID COWAN, Esq., of Auchendrane, bequeathed £1000 to the Association for Promoting the Endowment of the University.

Sir RODERICK IMPEY MURCHISON gave £6000 for the Endowment of the Chair of Geology.

J. O. HALLIWELL PHILLIPPS, Esq., presented his valuable Shakespearean Collection to the University.

ROBERT COX, Esq., W.S., bequeathed £5000 for general purposes and for completing the Dome of the University buildings.

Signor THEOPHILE BUCHER bequeathed his Music Library to the Chair of Music, and reversion of estate to found Scholarships in Music.

THE MERCHANT COMPANY OF EDINBURGH, and other Governors of George Watson's and Daniel Stewart's Hospitals—Founders of the Chair of Political Economy and Commercial Law.

Mr HENRY G. and Miss FRANCES WATSON—Donors of Fund for the "Watson-Gordon Professorship of Fine Art."

Sir D. BAXTER, of Kilmaron, bequeathed £20,000 for the Extension of the University buildings, and £20,000 for the Further Endowment of the Chairs in the Faculty of Arts.

Miss BROWN, of Lanfine, presented a portion of the Minerals and Fossils which belonged to her father—to be called "The Water-haugh Collection."

THE BELL TRUSTEES, who gave £6000 for the Endowment of the Bell Chair of the Theory, History, and Practice of Education. (Endowment increased in 1886 by £4500, added by Educational Endowments Commission.)

JOHN B. BAILLIE, who transferred the collection of Arabic MSS., formed by Lieut.-Col. Baillie of Leys, to the University Library.

Dr DAVID LAING, bequeathed his MSS. to the University Library.

Mrs HODGSON, presented Works on Political Economy, collected by her late husband, Prof. Hodgson, to the University Library.

Dr VANS DUNLOP bequeathed £3000 to the General Fund of the University.

SUBSCRIBERS to the CELTIC CHAIR, by whom a fund of £14,000 was raised for the endowment of this Chair by the exertions of Professor Blackie.

Miss MARY DICK bequeathed a moiety of the residue of her estate to accumulate for twenty-one years from 1883, or till it shall amount to £10,000, for the Foundation of a Chair of Comparative or Surgical Anatomy, as considered most to be required.

SUBSCRIBERS of £500 and upwards to the "UNIVERSITY OF EDINBURGH BUILDINGS EXTENSION SCHEME":—<sup>1</sup>

Sir David Baxter of Kilmaron, Bart., by bequest, less

Legacy Duty,	-	-	-	-	£18,000	0	0
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William M'Ewan, Esq., LL.D., M.P.,	-	-	-	-	6,500	0	0
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The Duke of Buccleuch and Queensberry, K.G.,	-	-	-	-	-	-	-
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D.C.L., LL.D.,	-	-	-	-	4,000	0	0
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<sup>1</sup> See Statement of Funds in Calendar, 1889-90, Appendix, p. 22.

The Magistrates and Council of the City of Edinburgh,	£3,100	0	0
The Right Hon. the Earl of Moray, - -	2,525	0	0
The Right Hon. The Earl of Rosebery, LL.D., -	2,400	0	0
The Royal College of Physicians of Edinburgh, -	1,575	0	0
The Right Hon. the Earl of Stair, K.T., - -	1,500	0	0
Messrs John Jeffrey & Co., - - - -	1,500	0	0
J. Fulton, Esq., Clinton Road, - - - -	1,150	0	0
Charles Andrew Aitchison, Esq., Queen Street, -	1,050	0	0
The Most Hon. the Marquis of Bute, - - -	1,000	0	0
Andrew Carnegie, Esq., New York and Pittsburg, -	1,000	0	0
The Right Hon. the Earl of Derby, - - -	1,000	0	0
J. R. Findlay, Esq., Rothesay Terrace, - - -	1,000	0	0
The Right Hon. The Earl of Home, - - -	1,000	0	0
The Right Hon. The Earl of Hopetoun, - - -	1,000	0	0
Sir William Stirling-Maxwell of Pollok and Keir, Bart., LL.D., M.P., - - - -	1,000	0	0
The Rt. Hon. The Earl of Wemyss and March, LL.D.,	1,000	0	0
The Right Hon. the Lord Justice-General Inglis, D.C.L., LL.D., Chancellor of the University, -	800	0	0
Messrs Thomas Nelson & Sons, - - - -	800	0	0
Henry George Watson, Esq., C.A., - - - -	800	0	0
The Most Hon. the Marquis of Lothian, - - -	750	0	0
The Society of Writers to the Signet, - - -	750	0	0
J. Lindsay Bennet, Esq., Taviton Street, London, -	710	0	0
James Cowan, Esq., Royal Terrace, - - - -	700	0	0
Robert Richardson, Esq., Bruntsfield Place, - -	700	0	0
C. Morrison, Esq. of Islay, - - - - -	700	0	0
Charles Jenner, Esq., - - - - -	650	0	0
David Anderson, Esq. of Moredun, - - - -	600	0	0
James H. Renton, Esq., Park Lane, London, - -	600	0	0
Professor Sir W. Turner, LL.D., D.C.L., - - -	600	0	0
His Grace The Duke of Devonshire, - - - -	500	0	0
Charles Cowan, Esq., of Logan House, - - - -	500	0	0
T. R. Buchanan, Esq., M.P., - - - - -	500	0	0
P. D. Swan, Esq., Provost of Kirkcaldy. - - -	500	0	0
Lady Campbell of Garscube, - - - - -	500	0	0
The late William Cumming, Esq., M.D., Ainslie Place,	500	0	0
The late James T. Gibson-Craig, Esq., York Place, -	500	0	0
Professor Crum Brown, - - - - -	500	0	0

The Goldsmiths' Company of London,	-	-	£500	0	0
Sir W. Mackinnon, Esq., of Balinakill and Loup,	-	-	500	0	0
Graham Menzies, Esq. of Hallyburton,	-	-	500	0	0
John Graham Menzies, Esq., Grosvenor Crescent,	-	-	500	0	0
W. D. Menzies, Esq., Grosvenor Crescent,	-	-	500	0	0
Miss Trail, Aberlady,	-	-	500	0	0
Messrs William Younger & Co., Abbey Brewery,	-	-	500	0	0
The Right Hon. The Earl of Zetland,	-	-	500	0	0
Anonymous,	-	-	500	0	0

The total amount of subscriptions received was £149,048, 2s. 5d.

EARL OF ROSEBERY provided £50 a year for Lectureship on Philosophy of Natural History for five years.

WILLIAM F. CUMMING, M.D., presented a Drinking Fountain, erected in the Quadrangle of the Old Buildings, in 1886.

JOHN HOPE, W.S., presented a Drinking Fountain to the University New Buildings, 1886.

ALEX. GIBSON, Esq., Advocate, bequeathed £2000, free of legacy-duty, to the General Fund of the University.

WILLIAM M'EWAN, Esq., LL.D., M.P., donor of the M'Ewan Hall, at a cost (including balance paid for Site and Grand Organ) of about £115,000.

ADAM GIFFORD, Senator of the College of Justice, bequeathed £25,000 for the foundation of a Lectureship for promoting, advancing, teaching, and diffusing the study of Natural Theology in the widest sense of that term.

JOHN FULTON, Esq., bequeathed £3000 to General University Fund, the greater part of which has been devoted to the equipment of the new Engineering Laboratory, called the "Fulton Laboratory."

Miss ELIZABETH STEVEN, of Bellahouston—Founder of the Steven Lectureship in connection with the Chair of Agriculture.

ALEXANDER LOW BRUCE, Esq., Edinburgh, £5000	} Founders of "the Bruce and John Usher Chair of Public Health" in the Faculties of Medicine and Science.
Mrs A. L. BRUCE, £500	
Miss A. BLACKWOOD BRUCE, £500	
Other members of the Bruce family, £163	
Sir JOHN USHER, of Norton, £8000	
WILLIAM YOUNGER & Co., £1000	

Benefaction by Sir JOHN USHER of Norton, for the building and equipment of a Laboratory and Class-Rooms in connection with Chair of Public Health.



Sir WILLIAM FRASER, K.C.B., LL.D.—

1. For foundation of Chair or Professorship to be called "The Sir William Fraser Professorship of Ancient History and Palæography," £25,000.
2. For Library purposes, £10,000.
3. Half of Residue of Estate for general purposes, but especially for Foundation of Bursaries, &c., in connection with History, or for promoting Historical Research, expected to amount to about £15,000.

JAMES RITCHIE, Esq., bequeathed £3000 for University purposes.

HIGHLAND AND AGRICULTURAL SOCIETY, £1021, 6s. 7d., and ROYAL SCOTTISH ARBORICULTURAL SOCIETY, £584, 3s. 10d., — for further Endowment of a Chair or Lectureship in Forestry.

£50 from C. JUNGHEHN, Rangoon, towards foundation of Chair of Forestry.

The Hon. JOHN MACGREGOR, Burmah, £500 for endowment of Chair of Forestry.

Vote of £80 by the EDINBURGH SCHOOL OF RURAL ECONOMY towards Lectureship of Agricultural Chemistry.

Dr PHILIP NELSON, Amman, bequeathed £84, 12s. 3d. to University Building Fund.

Sir WILLIAM OVEREND PRIESTLEY, M.P., £1000 towards cost of redecorating the Library Hall.

THOMAS M'KIE, £100 towards improving Students' Reading Room.

Hon. BOUVERIE PRIMROSE bequeathed £100 for Original Research and £100 for Library.

The SUBSCRIBERS, for founding a Classical Library in memory of Professors Sellar and Goodhart.

The SUBSCRIBERS, for founding a Departmental Library in Philosophy.

Miss CARRICK MOORE presented to the Geological Class Library, a set of the publications of the Palæontographical Society, the property of her late father, John Carrick Moore, Esq., F.R.S., F.G.S., of Corsewall, Wigtownshire.

Miss ELEANOR A. ORMEROD, F.E.S., LL.D., Collection of Entomological Diagrams prepared by her late sister.

Professor GWATKIN, D.D., Cambridge, mounted specimens of Molluscan Radulae for microscope.

Professor KIRKPATRICK, founder of the History Library.

Professor C. P. TIELE—Donation of £100 to History Library.

Rev. Dr JOHN WALKER, formerly Professor of Natural History in the University, bequeathed £991 for University Library and College Museum.

Physiology diagrams and microscopical specimens, books on physiology, histology, anatomy, &c., bequeathed by the late Professor Rutherford.

Mrs M. A. SHAW, Ventnor, of £100, to be designated "The Shaw Gift."

## BEQUESTS AND DONATIONS DURING 1900-1901.

I. *Bequests.*

Marble Bust of the late Emeritus Professor Sir Douglas Maclagan, by John Hutchison, R.S.A., bequeathed by the Professor.

II. *Donations.*

£2800 by Mrs Harriet G. Cox, widow of the late Robert Cox, Esq. of Gorgie, M.P., for the building of "The Hughes Bennett Laboratory for Physiological Research," in memory of her father the late John Hughes Bennett, M.D., Professor of the Institutes of Medicine and of Clinical Medicine in the University.

£2000 by Æneas J. G. Mackay, K.C., LL.D., Sheriff of Fife and Kinross—"the interest to be applied to supplement the present salary of the Assistant in the Historical Department."

Messrs R. and J. Garton, The Uplands, Golborne, Newton-le-Willows, Lancashire, have endowed the "Garton Lectures," on Colonial and Indian Agriculture, with an income of £150 a year.

£650 subscribed by Highlanders to found a Prize to be called the "Blackie Celtic Prize" to commemorate the late Professor John Stuart Blackie's services in promoting the study of the Celtic Language.

Grants in aid of forestry instruction in the University:—(1) Government grant, £100; (2) the Highland and Agricultural Society, £50.

Grant of £130 from the Edinburgh School of Rural Economy towards the Lectureship in Agricultural Chemistry.

£300 by Subscribers as a Memorial to the late Mr Andrew J. Ramsay for the formation and Endowment of a Library for the use of Students of the Class of Astronomy.

£100 a year for two years by Sir Thomas Gibson Carmichael, Bart., for Research in the Zoological Department.

Collections of Molluscan Radulæ for the microscope by the Rev. Professor Gwatkin, D.D., Cambridge.

Portrait of herself, by Miss E. A. Ormerod, LL.D.

Portfolio of Photographs of the University New Buildings and of the M'Ewan Hall, by Allan E. L. Clark, Esq.

£500 by Miss Joanna S. S. Gibson, Edinburgh, for the formation of a library of German literature.

£200 subscribed for the foundation of a prize for Women Students of Medicine in memory of the late Dorothy Gilfillan, M.B., Ch.B.

*Donations to Library, 1900-1901.*

Mr J. G. Kotzé—Documents relating to the judicial crisis in the South African Republic.

Professor Flint—Sermons and Addresses.

Professor Eggeling—Saraswati (Madhusûdana) 'Advaita Siddhi.'

- Dr P. J. Anderson—Collection of Books relating to Aberdeen and Aberdeen University, &c.
- Rev. H. L. Wheeler—Handbook of the New Public Library in Boston, compiled by Herbert Small; A Decade of Development in American State Universities, &c.
- Dr A. H. Strong—Christ in Creation and Ethical Monism.
- The Leigh Browne Trust—Biological experimentation by Sir B. W. Richardson.
- Combe Trustees—Science and Religion; Moral Philosophy; Discussions on Education; The Constitution of Man, &c.
- Dr George Smith—George Müller of Bristol, by Arthur T. Pierson.
- Mr Charles T. G. Masterman—Tennyson as a religious teacher.
- The John Rylands Library, Manchester—Catalogue of the Printed Books and MSS. 3 vols. ; Catalogue of Books printed in England, &c., and of books printed abroad to the end of the year 1640.
- Sir William Muir—The Torch of Guidance to the Mystery of Redemption, &c.
- Dr James Bugess—Gandhara Sculptures (some recent acquisitions), &c.
- The University Court, Glasgow—Catalogue of the Anatomical and Pathological preparations of Dr W. Hunter in the Hunterian Museum, 2 vols.
- Ayrshire and Galloway Archaeological Association—Monuments of the Royal Burgh of Irvine, 2 vols. ; Charters of the Abbey of Crossraguel, 2 vols. ; Charters of the Friars Preachers of Ayr, &c.
- Lt.-Colonel Johnston—Some account of the last Bajans of King's and Marischal Colleges, 1859-60, &c.
- Mr J. Wilson—Grammar and Dictionary of Western Panjabi.
- Rev. R. M. Fergusson—Alexander Hume, an early poet pastor of Logie and his intimates.
- Duc de Loubat—Il manoscritto Messicano Vaticano 3738 detto il codice Rios, &c.
- M'Quaker Trust—The Church of the first three Centuries, by A. Lamson; Reason in Religion, by F. H. Hedge; Select Discourses and Essays, by W. E. Channing; Faith and Doubt in the Century's Poets, &c.
- Dr R. Needham Cust—Memoirs of past years of a Septuagenarian.
- Lt.-Colonel Archibald Adams—Rajputana States. Second ed.
- Corporation of London—Calendar of Letter-Books, circa A.D. 1275-1312. Ed. by R. R. Sharpe.
- Sir James Sawyer—Contributions to Practical Medicine.
- Miss Eppie Frazer—Selby: a Pathological Morality.
- Dr Heywood Smith—Practical Gynæcology.
- Miss E. Ormerod, LL.D. — Sketches, chiefly by the late George Ormerod. 6 vols.
- Professor Kennedy—The Book of Jonah in four oriental versions.
- Mr E. S. Balch—Glacières or Freezing Caverns.

- W. Clarke Robinson—British Poets of the Revolution Age.
- D. Hay Fleming—Handbook to St Andrews and neighbourhood, &c.
- Professor Hastie—The Ideal of Humanity and Universal Federation.  
by K. C. F. Krause, ed. in English, by W. Hastie.
- D. C. Scott—Poems of A. Lampmann, ed. with a Memoir, by D. C. Scott.
- Dr W. Sturgis—A Memoir of H. J. Bigelow ; Orthopedic Surgery and other Medical Papers, &c.
- Knickerbocker Press—Festschrift in honor of Abraham Jacobi, M.D.
- Trustees of the British Museum—Excavations in Cyprus, by A. S. Murray, A. H. Smith and H. B. Walters ; Catalogue of the Hindi, Panjabi and Hindustani MSS. in the Library of the Br. Museum ; Catalogue of the Cuneiform tablets ; Index to the Charters and Rolls and The Book of the Dead, &c.
- Dr George Watt—The Pests and Blights of the Tea Plant.
- Rev. James Primrose—Strathbrock : or the History and Antiquities of Uphall.
- Dr T. W. Harvey—Memoir of H. A. Harvey, by his Sons.
- Mrs Brown, Dumfries—Tasso, *La Gerusalemme Liberata*, 1745.
- Young J. Pentland—Textbook of Physiology, vol. ii., ed. by E. A. Schafer.
- Professor Saintsbury—A History of Criticism and Literary Taste in Europe.
- H. M. Stationery Office—Calendar of Letters and State Papers relating to English Affairs ; Calendar of the State Papers relating to Ireland in the reign of Elizabeth ; Calendar of the entries in the Papal Registers relating to Gt. Britain and Ireland, &c.
- Lady Meux—The Miracles of the Blessed Virgin Mary and the Life of Hanna (Saint Anne) and the magical prayers of Ahēta Mikael. Ethiopic texts, ed. with English translations, by E. A. Wallis Budge.
- Messrs W. and R. Chambers—Chambers' Journal for 1900.
- Miss J. H. Anderson—An Inverness Lawyer and his Sons, 1769-1878.
- Mr Ralph Richardson—Coutts & Co., Bankers, Edinburgh and London.
- Professor Laurie—*Metaphysica et Vetusta*. Traduit sur la deuxième édition anglaise par G. Remacle.
- Cobden Club—A Collection of Books and Pamphlets on Free Trade, &c.

# ABSTRACT OF THE ACCOUNTS OF

# The University of Edinburgh

## FOR THE YEAR ENDING 31st AUGUST 1900.

### CAPITAL.

#### I. GENERAL UNIVERSITY FUND :—

Funds at beginning of year . . . . .	£68,998 12 7
Deduct payment in excess of Revenue out of accumulations of the Fund . . . . .	650 15 1
	£68,347 17 6

#### II. FUNDS PARTLY OR WHOLLY UNAPPROPRIATED TO PARTICULAR PURPOSES :—

Funds at beginning of year . . . . .	£125,738 4 7
Added during year—	
Surplus of Revenue over Expenditure for year . . . . .	214 12 7
	125,952 17 2

#### III. FUNDS APPROPRIATED TO PARTICULAR PURPOSES OTHER THAN BURSARIES, SCHOLARSHIPS, FELLOWSHIPS, AND PRIZES :—

Funds at beginning of year . . . . .	£139,212 18 10
Added during year—	
Donation from Aeneas James George Mackay, LL.D., Sheriff of Fife, formerly Professor of History in the University, for the establishment of a Fund to augment the salary of the assistant to the Professor of History . . . . .	£2,000 0 0
Carry forward,	£2,000 0 0
	£139,212 18 10
	£194,300 11 8
	3 1

Brought forward, £2,000 0 0	£139,212 18 10	£194,300 14 8
Moray Fund for Research, transferred from Head IV. below . . . . .	20,286 3 7	
Amount in hands of the Athletic Field Committee handed over to the adminis- tration of the University Court for behoof of the Field . . . . .	450 0 0	
Surplus on Pension Fund . .	2,298 6 7	
Surplus of Revenue over Ex- penditure . . . . .	259 13 7	
	<hr/>	25,294 3 9
		<hr/>
		164,507 2 7
IV. FUNDS FOR BURSARIES, SCHOLARSHIPS, FELLOWSHIPS, AND PRIZES :—		
Funds at beginning of year . . . .	£355,851 13 5	
Legacy by the late Miss Janet Charles Brown, for the founda- tion and endowment of three Bursaries in the Faculty of Divinity to be called "The Misses Brown, Spring Gar- dens, Bursaries" . . . . .	1,000 0 0	
Added during year— Surplus of Revenue over Ex- penditure . . . . .	1,611 10 8	
	<hr/>	358,463 4 1
Deduct Moray Fund for Re- search transferred to Head III. above. . . . .	20,286 3 7	
	<hr/>	338,177 0 6
V. ESKBANK FEU-DUTIES—CASUALTY FUND.		
Fund at beginning of year . . . .	£358 1 5	
Added during the year :— Surplus of Revenue over Expenditure for year . . . . .	27 4 11	
	<hr/>	385 6 4
Total Funds at 31st August 1900 . . . .		<hr/>
		£697,370 4 1

NOTE.—The above Funds are stated at their book value or cost price. The market value of the Funds at the 31st August 1900 exceeded the book value by £26,030, 15s. 11d. No notice is taken above of the University Buildings, New Medical School, Music Class Room, and Principal's Official Residence, or of the Library, Museum, and Furnishings of the University, as the values of these are not known.



REVENUE AND EXPENDITURE.

I. GENERAL UNIVERSITY FUND.

*Revenue.*

*Revenue.*

1. Matriculation Fees . . . . .	£2,903	5	0
2. Entrance Fees from Students not matriculated . . . . .		11	0 0
3. Fees in lieu of Matriculation Fees . . . . .		90	6 0
4. Preliminary Examination Fees . . . . .		436	8 0
5. Graduation Fees :—			
(1) Arts . . . . .	£1,069	8	6
(2) Science . . . . .	278	4	6
(3) Medicine . . . . .	6,033	14	6
(4) Divinity . . . . .	30	8	6
(5) Law . . . . .	53	0	0
(6) Music . . . . .	1	11	6
		7,466	7 6
6. Fees of Registration of Members of General Council . . . . .		328	0 0
7. Fees of Access to Library . . . . .		48	9 0
8. Income from Accumulations of the General University Fund . . . . .		2,199	6 10
9. Income from Funds bequeathed for general purposes :—			
(1) Straton Fund . . . . .	£422	1	4
(2) Cox Fund . . . . .	69	5	3
(3) Gibson Fund . . . . .	64	11	9
		555	18 4
10. Income from Funds partly appropriated to particular purposes, the Surplus Income of which falls to general purposes :—			
(1) Leith Harbour Annuity Fund . . . . .	£623	2	3
(2) Reid Fund . . . . .	480	9	7
		1,103	11 10
11. Income from Funds specifically appropriated by Deed of Endowment to Class Expenses :—			
(1) Fund for Chair of Engineering . . . . .	£23	3	2
(2) Fund for Chair of Geology . . . . .	45	6	5
Carry forward,	£68	9	7
		£15,142	12 6

		Revenue.	Expenditure.
Brought forward,	£68 9 7	£15,142 12 6	£ ...
(3) Fund for Chair of Fine Art	40 13 5		
(4) Fund for Chair of Commercial and Political Economy . . . . .	74 0 0		
(5) Gilchrist Fund for purchase of apparatus . . . . .	79 12 0		
		262 15 0	
12. Income from Parliamentary Grant . . . . .		25,870 0 0	
13. Income from Endowment of Chairs in the Faculty of Divinity . . . . .		251 18 7	
14. Surplus on Fee Fund . . . . .		4,064 11 10	
15. Royalty from Publisher of University Calendar . . . . .		100 0 0	
16. Fees from Societies for Use of Rooms, &c. . . . .		32 1 6	
		£45,723 19 5	

### *Expenditure.*

<b>1. Expenses of Administration :—</b>			
(1) University Court . . . . .	..	£842 7 3	
(2) Senatus Academicus . . . . .	...	1,730 0 5	
(3) General Council . . . . .	...	209 6 11	
(4) Curators of Patronage . . . . .	...	20 6 3	
(5) Editing University Calendar . . . . .	...	50 0 0	
(6) Students' Representative Council . . . . .	...	35 0 0	
(7) Factor . . . . .	...	716 9 4	
(8) Law Agents . . . . .	...	47 5 4	
(9) Auditor . . . . .	...	25 19 0	
		£3,676 14 6	
<b>2. Salaries to Principal and Professors :—</b>			
(1) Salary to Principal in accordance with Section III. of Ordinance No. 27 of the Scottish Universities Commissioners . . . . .	£1,048 17 10		
(2) Salaries to Professors in accordance with Section VII., Sub-section 1 (b), of said Ordinance . . . . .	4,314 18 8		
(3) Salaries to Professors in accordance with Section VII., Sub-section 2, of said Ordinance . . . . .	1,500 0 0		
Carry forward,	£6,863 16 6	£45,723 19 5	£3,676 14 6

# Abstract of Accounts—Revenue and Expenditure.

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	Revenue.	Expenditure.
Brought forward,	£6,863 16 6	£45,723 19 5
(4) Salaries to Professors in accordance with Sections IX. and XI., Sub-section 2 (d), of said Ordinance . . . . .	3,143 14 4	£3,676 14 6
(5) Salaries to Professors in the Faculty of Divinity in accordance with Section XI., Sub-section 2 (c), of said Ordinance . . . . .	451 18 7	
(6) Salary of Professorship instituted subsequent to said Ordinance . . . . .	130 0 0	
3. Provision for Pensions to Retired Professors . . . . .		10,589 9 5
4. Upkeep of Buildings :—		5,000 0 0
(1) Buildings and Furnishings	£4,730 18 10	
(2) Lighting, Heating, and Cleaning . . . . .	1,516 19 5	
(3) Public Burdens and Feuduties . . . . .	484 11 10	
4) Insurance . . . . .	220 0 6	
5. Equipment and Upkeep of Library . . . . .		6,952 10 7
6. Equipment and Upkeep of Museums . . . . .		2,466 18 9
7. Equipment and Upkeep of Laboratories, including Class Expenses . . . . .		366 6 9
8. Lecturers and Assistants . . . . .		3,459 7 6
9. Examiners . . . . .		9,795 13 3
10. Service . . . . .		2,346 4 11
11. Class Medals and Prizes . . . . .		1,107 11 4
12. Graduation Expenses . . . . .		227 5 8
13. Expenses in connection with Public Health Institute . . . . .		154 3 0
14. Incidental Expenses and Grants . . . . .		196 18 10
		35 10 0
Carried to Abstract . . . . .	£45,723 19 5	£46,374 14 6

## II.—FEE FUND ACCOUNT AND SALARIES ACCOUNT :—

	Revenue.	Expenditure.
1. Fee Fund Account . . . . .	£25,928 9 0	£25,928 9 0
2. Salaries Account . . . . .	9,555 7 10	9,555 7 10
3. Fees collected for Professors and Lecturers not falling into Fee Fund . . . . .	494 0 6	494 0 6
Carried to Abstract . . . . .	£35,977 17 4	£35,977 17 4

### III.—FUNDS PARTLY OR WHOLLY UNAPPROPRIATED TO PARTICULAR PURPOSES :—

	Revenue.	Expenditure.
1. Annuity under the Edinburgh Corporation Stock Act, 1894 . . . . .	£1,683 17 8	£1,683 17 8
2. Reid Fund . . . . .	1,482 18 0	1,482 18 0
3. Reid Professorship of Music, Assistants, and Expenses Fund . . . . .	544 15 0	333 16 6
4. Straton Fund . . . . .	422 1 4	422 1 4
5. Cox Fund . . . . .	69 5 3	69 5 3
6. Gibson Fund . . . . .	64 11 9	64 11 9
7. University Building Fund . . . . .	3 14 1	...
Carried to Abstract . . . . .	<u>£4,271 3 1</u>	<u>£4,056 10 6</u>

### IV.—FUNDS APPROPRIATED TO PARTICULAR PURPOSES OTHER THAN BURSARIES, SCHOLARSHIPS, FELLOWSHIPS, AND PRIZES :—

	Revenue.	Expenditure.
1. Baxter Salary Fund . . . . .	£582 8 7	£582 12 11
2. Bell Chair of Education . . . . .	348 8 9	349 14 8
3. Celtic Chair . . . . .	503 3 5	503 12 2
4. Lectureship in Procedure and Evidence . . . . .	100 0 0	100 0 0
5. Chair of Commercial and Political Economy . . . . .	524 0 0	524 0 0
6. Chair of Engineering, viz. :—		
(1) Fund for Professor's Salary . . . . .	192 19 8	192 19 8
(2) Fund for Expenses of the Chair . . . . .	23 3 2	23 3 2
7. Chair or Lectureship on Forestry . . . . .	237 6 9	237 6 9
8. Gilchrist Fund . . . . .	79 12 0	79 12 0
9. Gifford Lectureship . . . . .	673 12 5	32 13 0
10. Muir Chair of Sanskrit . . . . .	226 16 6	226 16 6
11. Murchison Chair of Geology, viz. :—		
(1) Fund for Professor's Salary . . . . .	179 19 9	181 0 6
(2) Fund for Expenses of the Chair . . . . .	35 19 7	35 19 7
12. M'Ewan Hall . . . . .	725 3 6	725 3 6
13. Moray Fund for Research . . . . .	578 18 1	834 10 0
14. Mackay Fund . . . . .	3 15 6	...
15. Nichol Foundation . . . . .	47 19 4	47 19 4
16. Pulteney Chair of Agriculture . . . . .	39 4 0	39 4 0
17. Chair of Public Health . . . . .	453 8 6	459 4 10
18. Pension Fund . . . . .	5,361 9 6	3,063 2 11
19. Steven Lectureship on Agriculture . . . . .	86 16 9	86 16 9
20. Thomson Funds, viz. :—		
(1) Fund for Salary of Professor of Natural History. . . . .	37 7 7	37 7 7
Carry forward, . . . . .	<u>£11,041 13 4</u>	<u>£8,362 19 10</u>

	Brought forward.	Revenue.	Expenditure.
		£11,041 13 4	£8,362 19 10
(2) Fund for Expenses of Chair of Geology . . . . .		9 6 10	9 6 10
21. Watson Gordon Professorship of Fine Art., viz. :—			
(1) Fund for Professor's Salary . . . . .		425 13 2	425 13 2
(2) Fund for Expenses of the Chair . . . . .		40 13 5	40 13 5
22. Library Fund . . . . .		11 2 7	37 10 0
23. Natural History Museum Fund . . . . .		12 7 5	119 0 11
24. Research Fund . . . . .		2 9 3	...
25. Tiele Library Fund . . . . .		2 6 9	...
26. Lectures on Agricultural Chemistry . . . . .		130 0 0	130 0 0
27. Chair of Conveyancing . . . . .		105 0 0	105 0 0
28. University Athletic Field Fund . . . . .		7 11 7	...
Carried to Abstract		£11,788 4 4	£9,230 4 2

V.—FUNDS FOR BURSARIES, SCHOLARSHIPS, FELLOWSHIPS, AND PRIZES :—

	Revenue.	Expenditure.
1. Aitken Scholarship . . . . .	£102 12 3	£5 0 1
2. Ardvorlich Bursary . . . . .	15 8 9	15 8 9
3. Neil Arnott Prize . . . . .	36 3 8	36 3 8
4. Neil Arnott Scholarship . . . . .	33 3 4	17 1 1
5. Baxter Mathematical and Philosophical Scholarships . . . . .	124 15 1	95 10 11
6. Baxter Natural and Physical Science Scholarships . . . . .	149 7 4	146 19 0
7. Misses Baxter of Balgavies Scholarships . . . . .	158 14 10	79 6 7
8. John Edward Baxter Scholarships, viz. :—		
(1) Fund for Scholarships . . . . .	240 6 5	201 9 2
(2) Fund for Examiners' Fees . . . . .	11 11 7	10 13 0
9. Bruce of Grangehill and Falkland Bursaries and Scholarships . . . . .	437 12 5	495 14 0
10. Beaney Prize . . . . .	31 7 2	0 8 5
11. Buchanan Scholarship . . . . .	39 3 0	38 11 11
12. Buchanan Bursary . . . . .	23 2 8	0 10 6
13. Bucher Scholarship . . . . .	118 10 2	114 2 7
14. Bayne Bursary . . . . .	24 2 5	24 2 5
15. Brown Bursaries . . . . .	24 2 5	24 2 5
16. Blair Arts Bursary . . . . .	9 5 2	9 5 2
17. James Beattie's Bursaries . . . . .	1 14 2	1 14 2
18. Misses Brown Bursaries . . . . .	28 18 11	2 8 0
19. Cairns Bursary . . . . .	18 6 8	18 6 8
20. Cameron Prize . . . . .	88 15 4	9 11 9
Carry forward,	£1,717 3 9	£1,346 10 3

	Revenue.			Expenditure.		
	Brought forward,			£1,346 10 3		
21. Dr John Aitken Carlyle's Medical Bursaries	£1,717	3	9	40	10	1
22. Cousin Prize . . . . .	54	0	8	14	12	7
23. Bailie Cousin Bursary . . . . .	14	12	7	0	12	8
24. Cobb Scholarship . . . . .	27	0	4	33	2	11
25. Crichton Bursaries, and Scholarships .	28	18	11	666	15	3
26. Drummond Scholarship, viz. :—	969	4	0			
(1) Fund for Scholarship . . . . .	91	18	1	91	18	1
(2) Fund for Examiners' Fees . . . . .	6	0	7	23	3	7
27. William Dickson Travelling Fund . . . . .	86	12	6	138	13	0
28. Dundas Bursaries . . . . .	44	14	11	41	0	10
29. Dalgleish and Macmorran Bursary . . . . .	13	7	10	13	7	10
30. Edinburgh University Endowment Association's Arts Bursaries . . . . .	...			60	0	0
31. Ettles' Divinity Scholarships . . . . .	97	15	10	56	3	8
32. Ettles' Medical Scholarship . . . . .	30	3	1	30	3	1
33. Ellis Prize . . . . .	32	3	0	0	8	1
34. Falconer Memorial Fellowship, viz. :—						
(1) Fund for Fellowship . . . . .	108	1	3	161	14	1
(2) Fund for Examiners' Fees . . . . .	4	2	1	0	1	0
35. Fotheringham and Forrest Bursaries . . . . .	38	4	6	19	11	6
36. James Fairbairn Scholarship . . . . .	32	16	2	32	16	2
37. Freeland Barbour Fellowship . . . . .	48	6	8	0	12	10
38. Fraser Bursaries . . . . .	41	19	5	41	19	5
39. Donald Fraser Bursary . . . . .	49	1	9	49	1	9
40. Ford Bursaries . . . . .	32	3	2	32	3	2
41. Glover Divinity Scholarship . . . . .	37	1	2	23	3	9
42. Gray Scholarships . . . . .	88	0	0	84	14	2
43. Guthrie Fellowship . . . . .	82	14	8	82	14	8
44. Grierson Bursaries . . . . .	307	15	0	297	10	2
45. Gunning Scholarships . . . . .	3	4	9	0	0	8
46. Gunning Medical Prizes . . . . .	16	16	6	0	3	7
47. Gunning Divinity Prize . . . . .	14	9	0	0	2	0
48. Goodsir Memorial Prize . . . . .	128	7	2	120	12	1
49. Hamilton Philosophical Fellowship, viz. :—						
(1) Fund for Fellowship . . . . .	81	15	10	40	17	2
(2) Fund for Examiners' Fees . . . . .	4	4	7	10	11	2
50. Harrison Bursary . . . . .	25	3	2	29	7	2
51. Hope Prize . . . . .	78	9	3	58	18	9
52. Robert Hunter Bursaries . . . . .	38	8	0	0	15	6
53. Houldsworth Scholarship . . . . .	44	5	6	0	11	9
54. Jardine Bursary . . . . .	41	19	4	41	19	4
55. Jardine of Thorlieshope Bursaries . . . . .	271	10	2	271	0	10
56. Johnston of Harthope Bursary . . . . .	15	13	7	15	13	7
57. Jeffrey Scholarships . . . . .	135	9	10	133	3	0

Carry forward, £4,983 18 7 £4,107 1 2



	Revenue.			Expenditure.		
Brought forward,	£4,983	18	7	£4,107	1	2
58. Robert Johnston Bursaries . . . . .	54	0	7	54	0	7
59. Archibald Johnstone Bursary . . . . .	12	10	6	12	10	6
60. David Kidd Divinity Scholarship . . . . .	34	14	9	34	14	9
61. Kelland Memorial Prize . . . . .	4	8	11	4	8	11
62. General Lang's Bequest . . . . .	15	8	9	0	4	3
63. Lockerby Bursary . . . . .	30	17	0	30	17	0
64. Lorimer Travelling Scholarship . . . . .	41	0	8	78	5	2
65. Leckie Mactier Fellowship . . . . .	77	3	9	77	3	9
66. Leighton and Struthers Bursary . . . . .	22	11	5	22	11	5
67. Charles Maclaren Scholarship, viz.:—						
(1) Fund for Scholarship . . . . .	108	19	2	110	7	5
(2) Fund for Examiners' Fees . . . . .	7	14	5	0	2	0
68. Maxton Scholarship . . . . .	40	18	3	40	18	3
69. Mackenzie Classical Scholarship . . . . .	105	5	9	105	5	9
70. Macpherson Bursaries . . . . .	84	7	5	81	15	3
71. Marshall Bursary . . . . .	31	7	2	0	14	10
72. Mackenzie Bursaries in Anatomy . . . . .	31	2	10	31	2	10
73. Mackinnon Bursaries . . . . .	58	15	5	64	0	10
74. Mann Bursaries . . . . .	82	8	6	67	7	7
75. Mackie Bursaries . . . . .	57	17	10	57	17	10
76. Maclaurin Bursary . . . . .	68	6	2	65	9	6
77. Maule Bursaries . . . . .	82	6	4	82	6	3
78. Milner Fothergill Prize . . . . .	0	13	0	0	2	6
79. Muirhead Prize . . . . .	15	1	6	15	13	6
80. M'Lurg and Penman Bursary . . . . .	19	6	4	0	5	3
81. Miller Bursary . . . . .	23	3	2	23	3	2
82. Mitchell and Shortt Bursary . . . . .	21	5	3	0	5	8
83. Mackenzie (Stornoway) Bursary . . . . .	25	17	6	25	17	6
84. Mouat Scholarship . . . . .	52	18	0	0	14	1
85. M'Cosh Graduate's Bursary . . . . .	147	7	4	111	17	10
86. M'Cosh Medical Bursary . . . . .	11	3	1	8	9	5
87. Newton Bursaries . . . . .	86	11	5	62	18	11
88. Nairne Bursary . . . . .	16	1	8	16	1	8
89. Prizes in Sanskrit . . . . .						
90. Philosophy Honours Exhibition . . . . .	...			20	0	0
91. Pitt Club Classical Scholarship . . . . .	50	8	11	56	8	11
92. Pitt Club Theological Scholarship . . . . .	96	3	9	96	3	9
93. Patrick Bursaries . . . . .	145	1	7	145	0	0
94. Pattison Bursary . . . . .	10	2	7	5	3	0
95. Patterson Bursary . . . . .	15	10	4	15	10	4
96. Bailie John Penman Bursary . . . . .	14	4	8	14	4	8
97. Rev. John Penman High School Bursaries . . . . .	7	15	10	0	2	1
98. Pringle and Wardrop Bursary . . . . .	17	1	5	17	0	1
99. Rhind Scholarships . . . . .	154	19	1	154	19	2
Carry forward,	£6,982	0	7	£5,919	13	4

	Revenue.			Expenditure.		
Brought forward, .	£6,982	0	7	£5,919	13	
100. Renton Bursary in Arts . . . . .	19	5	11	19	5	11
101. Renton Bursary in Divinity . . . . .	19	5	11	19	5	11
102. Ramsay Bursary in Arts . . . . .	10	14	5	10	14	5
103. Ramsay Bursary in Divinity . . . . .	16	1	8	0	7	
104. Ritchie Scholarships . . . . .	78	4	1	51	1	
105. Horsliehill Scott Bursary . . . . .	64	5	7	54	19	
106. Shaw Philosophical Fellowship . . . . .	134	13	5	133	13	
107. Steven of Bellahouston Scholarship . . . . .	67	10	10	63	6	
108. Syme Surgical Fellowship, viz. :—						
(1) Fund for Fellowship . . . . .	99	1	7	99	1	
(2) Fund for Examiners' Fees . . . . .	8	13	8	0	2	
109. Scott and Dunbar Prize . . . . .	27	8	4	28	18	
110. Dobbie Smith Prize . . . . .	4	17	4	0	1	
111. Mackay Smith Scholarships, viz. :—						
(1) Fund for Scholarships . . . . .	96	9	8	84	8	
(2) Fund for Examiners' Fees . . . . .	3	17	0	1	6	
112. Stark Scholarship . . . . .	54	0	7	7	19	
113. James Scott Scholarship . . . . .	31	2	11	31	17	
114. Stewart Bursaries . . . . .	34	14	9	26	9	
115. George Scott Scholarship . . . . .	34	2	7	16	2	
116. Tarsappie Bursary . . . . .	5	0	4	0	1	
117. Trevelyan Scholarship . . . . .	30	0	7	9	3	
118. Trotter and Penman Bursary . . . . .	12	9	1	12	9	
119. Vans Dunlop Scholarships . . . . .	2,280	9	9	1,907	12	
120. Wightman Prize . . . . .	14	7	1	0	3	
121. Robert Wilson Prize . . . . .	7	15	6	7	10	
122. Webster Bursaries . . . . .	124	0	8	127	3	
123. John Welsh Bursaries . . . . .	195	13	2	224	5	
124. Whitelaw Bursaries . . . . .	68	12	6	68	12	
125. King William III. Bursaries . . . . .	50	0	0	37	10	
126. Weir, Jenkins, Hepburn, and Lightbody Bursary . . . . .	10	19	9	10	19	
127. Wight, M'Call, and Christie Bursary . . . . .	12	11	10	12	11	
Carried to Abstract . . . . .	£10,598	11	1	£8,987	0	

## VI. ESKBANK FEU-DUTIES—CASUALTY FUND :—

	Revenue.			Expenditure.		
Amount thereof . . . . .	£46	11	11	£19	7	
Carried to Abstract . . . . .	£46	11	11	£19	7	

ABSTRACT OF REVENUE AND EXPENDITURE.

	Revenue.			Expenditure.		
I. GENERAL UNIVERSITY FUND . . . . .	£45,723	19	5	£46,374	14	6
II. FEE FUND ACCOUNT AND SALARIES ACCOUNT . . . . .	35,977	17	4	35,977	17	4
III. FUNDS PARTLY OR WHOLLY UNAPPROPRI- ATED TO PARTICULAR PURPOSES . . . . .	4,271	3	1	4,056	10	6
IV. FUNDS APPROPRIATED TO PARTICULAR PURPOSES OTHER THAN BURSARIES, SCHOLARSHIPS, FELLOWSHIPS, AND PRIZES . . . . .	11,788	4	4	9,230	4	2
V. FUNDS FOR BURSARIES, SCHOLARSHIPS, FELLOWSHIPS, AND PRIZES . . . . .	10,598	11	1	8,987	0	5
VI. ESKBANK FEU-DUTIES—CASUALTY FUND . . . . .	46	11	11	19	7	0
	<hr/> £108,406			<hr/> £104,645		
Deduct amount of sums appearing under two different heads owing to transfers between the Funds under these heads	21,707	2	7	21,707	2	7
NET TOTAL REVENUE AND EXPENDITURE,	<hr/> £86,699			<hr/> £82,938		

# The University Court.

ABSTRACT OF THE PROCEEDINGS OF THE UNIVERSITY COURT, FROM 1ST MAY 1900 to 1ST MAY 1901.

MONDAY, 14TH MAY 1900.—The Court resolved to record their deep sense of the loss sustained by the University in the death of Sir William Overend Priestley, M.D., LL.D., Member of Parliament for the Universities of St Andrews and Edinburgh; as well as their appreciation of his services, and their gratitude for his munificent generosity to the University. In this expression the Court desired to associate with them the General Council of the University.

The Minutes of last Meeting were submitted and approved.

It was intimated that copies of the Court's Draft Ordinance (Foundation of the Sir William Fraser Chair) had been sent to the Senatus and the General Council as required by the Universities (Scotland) Act, 1889, section 21.

On a proposal that the Court should move to have certain alterations made on Ordinance No. 40 (Regulations for the Degree of B.L.), Sections I. and II., the Court, in view of the fact that the qualifications for this Degree were fully considered by the Universities Commission, and laid down so recently as 1893, were of opinion that it is not expedient to take steps for a modification of the Ordinance, and resolved to defer the question till after the Report of the Commission has been issued.

The Senatus reported that Dr John Wyllie having presented his Commission as Professor of Medicine was duly inducted a Member of the Senatus Academicus.

Acting on a Memorial addressed by the Senatus to the Court, it was agreed to enter into communication with the Courts of the other Universities in order to ascertain whether they would join in a representation to the Privy Council with the object of securing that the institution of new Chairs in the Scottish Universities shall proceed directly by deed of constitution under Section VI. (10) of the Universities (Scotland) Act, 1889, instead of by Ordinance under Section XXI. of the aforesaid Act.

The Court approved of a recommendation of the Senatus that Professor Wyllie be assigned a share of the teaching of the University Class of Clinical Medicine in the Royal Infirmary, and of the clinical

examinations for degrees in medicine such as had been under the charge of his predecessor.

Copies of Reports by the Business and Finance Committees of the General Council of the University were submitted. It was agreed to obtain the opinion of the Senatus on a representation by the General Council regarding the values assigned to Modern Languages in the Bursary Examination, and also of a representation by the Council that some modification should be made, in the case of foreign students, in the Medical Preliminary Examination in English.

The draft of the Commission proposed to be issued by the Patrons to the new Professor of Conveyancing was submitted for revision and adjustment under Ordinance 144, and was remitted to a committee.

It was remitted to a committee to consider and report as to an appointment to the vacant Additional Examinership in Medicine in its bearings on Public Health.

Various Reports by the Business and Law and Finance Committees were submitted and approved.

MONDAY, 18TH JUNE 1900.—The Minutes of last Meeting were submitted and approved.

The draft of the Commission which the Curators of Patronage propose to issue to the new Professor of Conveyancing was approved.

Dr J. O. Affleck was appointed Additional Examiner in Medicine in its bearings on Public Health.

On the recommendation of the Senatus the Court approved of an honours half-course on Political Philosophy being given by the University Lecturer in Moral Philosophy during next summer session. The fee was fixed at £2, 2s.

On the recommendation of the Senatus a grant of £58 from the Earl of Moray Endowment was made to Dr T. H. Milroy for purposes of research.

Dr John Gibson, Edinburgh, was appointed Additional Examiner in connection with a Thesis submitted by a candidate for the degree of D.Sc.

A bequest by the late Emeritus-Professor Sir Douglas MacLagan of a marble bust of himself was intimated.

A letter from Sheriff Mackay, Q.C., was read, offering for the acceptance of the University Court the sum of two thousand pounds—the interest to be applied to supplement the present salary of the Assistant in the Historical Department, subject to conditions specified in the letter. The Court gratefully accepted the offer, and resolved to record their warm appreciation of the generosity of the donor.

It was intimated that presentation of six large volumes of interesting and valuable drawings, chiefly by her late father, had been made to the University Library by Miss E. A. Ormerod, LL.D. (Edin.), and that this—an additional gift by the same lady—had been suitably acknowledged.

It having been reported that the period within which the opinion of the Senatus and of the General Council might be received had expired on 23rd ult., the Draft Ordinance instituting the Sir William Fraser Chair of Ancient History, &c., was submitted, and finally adjusted.

Receipt was intimated of a grant of £50 by the Highland and Agricultural Society towards the Lectureship in Forestry for the current year.

Various Reports by the Finance and Works Committees were submitted and approved.

MONDAY, 16TH JULY 1900.—The Minutes of last Meeting were submitted and approved.

A report by the Committee on the Medical Education of Women was submitted and approved, and an application by the Scottish Association for the Medical Education of Women for renewal of recognition for next academical year of the Medical College for Women, Minto House, Chambers Street, was granted.

On the recommendation of the Senatus, grants were made from the Earl of Moray Endowment for purposes of original research to the following:—Dr Alfred C. Sandstein, Dr H. E. Gibbs, Professor Schäfer, Dr John S. Flett, Dr J. Wilson Dougal, Mr Evan H. Fraser, M.B., C.M.; Mr Sutherland Simpson, M.B., C.M.

The Court, having previously approved of certain proposals made by Messrs R. & J. Garton, The Uplands, Golborne, Newton-le-Willows, Lancashire, in accordance with which provision is made for the delivery of courses of Lectures—in connection with the Chair of Agriculture—in Colonial and Indian Agriculture, and having requested the Senatus to frame regulations under which these lectures should from time to time be delivered, approved of the following regulations as proposed by the Senatus:—The course of lectures shall extend over two winter sessions, the course in each session to consist of not less than twenty lectures. The lectures shall be free to students attending, or who have attended during the previous year, the class of Agriculture; and a fee of one guinea (with five shillings entrance fee for non-graduating students in Agriculture) shall be charged for each course of twenty lectures, the days and hour of meeting to be Mondays and Thursdays, from 12.30 to 1.30.

On the recommendation of the Senatus, the Court resolved to give their support to a representation by the Council of the British Association for the Advancement of Science to the Secretary of State for India, that it would be advantageous if the age of entrance to the Indian Forest Department were raised so as to enable candidates who have received a University education to compete.

It was intimated that the Court's Ordinance, No 1 (Separation of the teaching of Medical Jurisprudence or Forensic Medicine and Public Health in the University of Edinburgh) had been approved by Her



Majesty in Council on 29th ult. The Ordinance accordingly comes into force as from 1st October next.

The University Representatives on the Joint Board of Examiners of the Scottish Universities for the year from 1st February next were appointed as follows :—1, Professor Saintsbury (English) ; 2, Professor Hardie (Classics) ; 3, James Goodwillie, M.A., B.Sc. (Mathematics and Dynamics) ; 4, George B. Gardiner, M.A. (Modern Languages).

The recommendations by the respective Professors as to the appointment of University Assistants for next academical year, which had been received up to the date of meeting, were approved, and such of them as are University Lecturers were continued in their Office as Lecturers for the same period.

Dr A. P. Aitken was reappointed University Lecturer on Agricultural Chemistry for next academical year.

The Court approved of Reports by the Works Committee providing for the re-benching, &c., of the Greek class-room, the heating of certain class-rooms, &c. ; electric light installation in various departments, renewal of plumber work in Chemistry and Pathology departments, cleaning of M'Ewan Hall and cleaning and painting of certain rooms in the old and new buildings, and various alterations, at an aggregate estimated cost of about £950.

Various Reports by the Finance and Business and Law Committees were submitted and approved.

MONDAY, 22ND OCTOBER 1900.—The Minutes of last Meeting were submitted and approved.

It was reported that the Meeting had been postponed from 15th inst. to 22d current under Standing Orders.

The Report of the Finance Committee on Lectureships, Assistants, and Class Expenses for the current academical year was submitted and approved.

It having been intimated that Mrs Cox had agreed to provide, in addition to her gift of £2000 already announced, a further sum of £800 towards the erection of the Hughes Bennett Laboratory of Physiological Research, the Court resolved to record anew their obligations to Mrs Cox, and their appreciation of her kind interest in this important addition to the University.

Reports of the Senatus under Ordinance No. 11, Sections XIII. (1) and XXII. were submitted.

The Senatus reported that John Little Mounsey, Esq., W.S., having presented his Commission as Professor of Conveyancing, was duly inducted a member of the Senatus Academicus.

Grants recommended by the Senatus from the Earl of Moray Endowment for purposes of original research were approved.

Certain suggestions made by the Senatus with regard to the administration of Sheriff Mackay's endowment to supplement the present salary of the University Assistant in History, were approved.

The Assistant was appointed University Lecturer, with the designation Mackay Lecturer in the Department of History; the lecturer to deliver during the current winter session a course of twenty lectures on a historical subject. The course will be open free to members of any of the history classes. The fee for other students who may desire to attend was fixed at £1, 1s., with 5s. entrance fee for non-matriculated students.

Professors P. D. Hahn and J. C. Beattie, South African College, Cape Town, were recognised as extra-academical lecturers, whose courses of instruction in Chemistry (theoretical and practical) and Physics, respectively, shall qualify for graduation in Medicine in the University.

The Hon. Lord Stormonth Darling was appointed a Curator of Patronage in room of the Right Hon. Lord Robertson, resigned.

The Members of the Standing Committee were appointed for the current academical year; and the Court's quota of Members on the Library and Museum Committees were appointed for the same period.

It was reported that copies had been received of the General Report of the Commissioners under the Universities (Scotland) Act, 1889.

The Court gratefully accepted the gift of a portrait of Miss E. A. Ormerod, LL.D., St. Albans, a distinguished Honorary Graduate of the University.

An application by the Society of Chemical Industry for the use of the Chemistry Lecture Room on the evening of Tuesday, 6th proximo, for a meeting of the Scottish Section of the Society was granted.

Various Reports by the Finance and Works Committees were submitted and approved.

MONDAY, 12TH NOVEMBER 1900.—The Minutes of last Meeting were submitted and approved.

The Works Committee gave in their annual Report on the work that had been done and the expenditure incurred on the Buildings during the past financial year, together with an estimate of the probable sum to be expended on the Buildings during the current year. They also submitted their half-yearly Report on their expenditure on general repairs and jobbing work on the buildings.

A letter from Sir Thomas Clark, Bart., Joint Chairman of the Library Committee, was read, intimating his resignation as a member of that Committee. In accepting the resignation, the Court resolved to record their obligations to Sir Thomas Clark for the valuable services rendered by him over a series of years to the University in connection with the Library.

It was intimated that copies of a report by the Business Committee of the General Council of the University had been received and forwarded to Members of the Court. A representation by the General Council regarding the date of the Rectorial Election was also submitted.

Mr John Alan Murray, B.Sc., was reappointed Additional Examiner

in Agricultural Chemistry for two years from 1st January next. The appointment of Additional Examiners in the following subjects was remitted to Committees, with power to advertise should they see fit:—Political Economy; Education, and Schoolmaster's Diploma; Art and Archaeology; Engineering; Agriculture; Astronomy; Public Health Laboratory Work; Botany; Chemistry; Anatomy; Physiology; Pathology; Medical Jurisprudence and Public Health, and Sanitation, Sanitary Law and Vital Statistics; Surgery; Practice of Medicine; Clinical Medicine; and Midwifery.

It was intimated that a letter had been received from Miss Joanna S. S. Gibson, 6 Eglinton Crescent, Edinburgh, offering, for the acceptance of the University Court a sum of £500 towards the formation of a library of German literature, subject to conditions specified in the letter. The Court resolved to accept the gift with an expression of their thanks to the donor.

Various Reports by the Finance and Works Committees were submitted and approved.

MONDAY, 17TH DECEMBER 1900.—The Minutes of last Meeting were submitted and approved.

It was reported that the Court's Ordinance No. 2 (Foundation of the Sir William Fraser Chair of Ancient History and Palseography) had been forwarded to the Secretary for Scotland for submission to Parliament.

The Report by the Finance Committee on the University Accounts for 1899-1900 and estimates for 1900-1901 was submitted and approved.

Copies of Ordinance of the Glasgow University Court, No. 1 (Regulations for Degrees in Science in Agriculture, supplementary to Ordinance No. 134, Glasgow No. 33, made by the Commissioners under the Universities (Scotland) Act, 1889) having been submitted by the Business and Law Committee, it was agreed not to give notice of dissent to the Ordinance under Section 21 of aforesaid Act.

It was also agreed not to notify dissent from the following Ordinances of the St Andrews University Court:—Ordinance No. 1 (Foundation of the Bute Chair of Anatomy in the University of St Andrews); Ordinance No. 2 (Foundation of the Chandos Chair of Physiology in the University of St Andrews).

The Report as to Statistics to the Secretary for Scotland under Section 30 of the Universities (Scotland) Act, 1889, for the Academical Year 1899-1900, was submitted and approved.

On a report by a committee, it was agreed to appoint the following Additional Examiners:—1. J. Robertson Christie, LL.B. (Political Economy); 2. Stewart Alan Robertson, M.A. (Education and Schoolmaster's Diploma); 3. Sir W. M. Conway (Art and Archaeology); 4. J. L. E. Dreyer, Ph.D. (Astronomy); 5. James S. Gordon, B.Sc. (Agriculture).

It was reported under Standing Order 61 that the Chair of Engineer-

ing had become vacant through the death, on 16th ult., of Professor G. F. Armstrong.

Reports by the Senatus under Ordinance 11, XIII. (1) and XXII. were submitted. The Senatus reported that they had re-elected Professor Laurie as an Assessor in the University Court. The Senatus also reported that Professor Butcher had intimated his resignation as an Assessor in the University Court.

On the recommendation of the Senatus, the Court granted leave of absence to Professor Butcher, on account of the state of his health, for the remainder of the winter session, and approved of the arrangements proposed by the Senatus for carrying on the work of the Greek Chair during that period.

The Court approved of the arrangements proposed by the Senatus for conducting the work of the Chair of Engineering during the current session.

The Senatus reported their resolution to withdraw the Certificate of Literate in Arts (L.A.).

Grants recommended by the Senatus from the Earl of Moray Endowment for purposes of original research, and grants from the Crichton Scholarships Fund to certain research scholars for expenses incurred in connection with their researches, were approved.

The Court approved of a report of the Library Committee, transmitted by the Senatus, on the work of cataloguing the Library for the half-year to 31st August last.

The Court agreed to recognise the courses of the following Teachers in the Birkbeck Institution, London, for purposes of graduation:—1. John E. Mackenzie, B.Sc. (Chemistry, for graduation in Medicine and in Science); 2. Albert Griffiths, D.Sc. (Physics, for graduation in Medicine).

The Court, after consultation with the Senatus, appointed the following Additional Examiners in connection with Theses submitted for the degree of D.Sc.:—Professor Ewing, Cambridge; Professor Allan MacFadyen, Jenner Institute of Preventive Medicine, London; Dr. John Gibson, Heriot-Watt College; Professor Cunningham, Trinity College, Dublin; Professor G. B. Howes, Royal College of Science, London; Professor Walker, University College, Dundee.

The Court approved of the regulations proposed by the Senatus for the Misses Brown, Spring Gardens, bursaries in Divinity.

On the recommendation of the Senatus, it was agreed that members of the Honours Class in German be allowed to attend the short course in German Literature (part of the ordinary graduation course in German) without payment of the class fee.

On the request of the Senatus, the Court resolved to institute a Lectureship in Ancient History in the University, to be endowed out of a portion of the residue of the Sir William Fraser Bequest, and to advertise the same in order to the appointment of a Lecturer at an early date. The Court also agreed, on the recommendation of the

Senatus, that the lectures in connection with the Lectureship should consist of two Honours half courses, one in Greek History and one in Roman History, one to be delivered during part of the winter session and one during the summer session, and that they should be adapted primarily to the requirements of students preparing for graduation with honours in Classics.

The Court appointed J. Turnbull Smith, Esq., LL.D., Edinburgh, a member of the Library Committee for the current academical year, in succession to Sir Thomas Clark, Bart., resigned.

A further gift by the Rev. Professor Gwatkin, D.D., Cambridge, of a collection of molluscan radulæ for the microscope, was gratefully accepted with thanks to the donor.

MONDAY, 14TH JANUARY 1901.—The Minutes of last Meeting were submitted and approved.

The Report on the State of the Finances for 1899-1900 to the Secretary for Scotland, under Section 30 of the Universities (Scotland) Act, 1889, was submitted and approved.

The Court appointed Additional Examiners as follows:—1. J. Bretland Farmer, M.A. (Botany); 2. John Gibson, Ph.D. (Chemistry); 3. Robert Howden, M.A., M.B., C.M. (Anatomy, including Anthropology); 4. D. Noel Paton, B.Sc., M.D. (Physiology); 5. William Russell, M.D. (Pathology); 6. John C. M'Vail, M.D. (Medical Jurisprudence and Public Health, and Sanitation, Sanitary Law, and Vital Statistics); 7. Allan Macfadyen, B.Sc., M.D. (Public Health Laboratory Work); 8. John Shaw M'Laren, M.A., M.B., C.M. (Surgery); 9. James O. Aitleck, M.D. (Practice of Medicine); 10. Alexander James, M.D. (Clinical Medicine); 11. John W. Ballantyne, M.D. (Midwifery).

It was agreed to accept the fund, amounting at present to about £300, which had been subscribed in order to perpetuate the memory of the late Mr Andrew J. Ramsay—the fund to be vested in certain trustees, and to be devoted to the formation and endowment of a library, to be housed in the Royal Observatory, for the use of students attending the class of Astronomy in the University of Edinburgh, to be known as the Ramsay Memorial Library.

Various Reports by the Finance Committee were submitted and approved.

MONDAY, 18TH FEBRUARY, 1901.—Before proceeding to the ordinary business of the Meeting, the Court resolved to present an Address to The King relative to the death of Her Majesty Queen Victoria, and the accession of His Majesty to the Crown.

The Minutes of last Meeting were submitted and approved.

A report by the Senatus under Ordinance No. II., Section XIII. (1) was submitted.

The Senatus reported that they had elected Professor Rankine as one



of their Assessors in the University Court for the remainder of the period of office for which Professor Butcher had been appointed. Professor Rankine was appointed a member of the Business and Law Committee.

The Senatus reported that the Faculty of Medicine had appointed Professor Simpson to be Dean of the Faculty in room of Professor Fraser, who had resigned that Office.

On the recommendation of the Senatus, the Court approved of leave of absence being granted to Professor Tait, on account of the state of his health, for the remainder of the current session, and agreed to the arrangements proposed by the Senatus for carrying on the work of the Chair of Natural Philosophy during that period.

The Court approved of various grants, recommended by the Senatus, from the Earl of Moray Endowment Fund for the following researches:—

1. Research by Dr J. M. Beattie on the origin, &c., of cells in inflammation.

2. Researches by Mr Nelson Annandale in the Malay Peninsula.

3. Researches by Dr J. H. Ashworth on marine worms.

4. Research by Dr Beard on the development of Elasmobranch fishes.

On the recommendation of the Senatus, the Court approved of the institution of a course of fifty lectures, by the Professor of Fine Art, on British History as illustrated in Monuments and Topography, qualifying for Graduation with Honours in Arts. The fee was fixed at £3, 3s. It was also agreed that non-matriculated students may attend the class on payment of an entrance fee of five shillings in addition to the class fee.

The Court approved of the recommendation of the Senatus as to the delivery, by the University Assistant in Political Economy, of a course of twenty lectures on Marshall's Principles of Economics, the course to be given during next summer session, and to be intended as preparatory for honours students in Economic Science, and others. The fee for the course was fixed at £1, 1s.

The annual report of the Library Committee, made under the Universities (Scotland) Act, 1889, Section 7 (2), and Ordinance 64, Section xv., and the Librarian's Report for 1899-1900, made under the same Ordinance, section xvi., were submitted.

The Court granted the following applications for recognition:—(1) By the Yorkshire United Independent College, Bradford (Divinity, under Ordinance 63, 1); and (2) by Dr Alexander Bruce, Edinburgh (Medicine).

Dr Bell and Mr Dundas were appointed members of the University Field Committee for the year from 15th proximo.

There was laid before the Court an application by Professor Tait for permission to retire, on a retiring allowance, from the Chair of Natural Philosophy, which he has held since 1860. The Court, in granting the application, resolved to record in their Minutes their great regret at the severance of so long and honourable a connection with the



University. It was agreed that the resignation should take effect as from 30th April next.

Dr George Berry was reappointed University Lecturer on Diseases of the Eye.

Mr Henry J. Cunningham, B.A., Balliol College, Oxford, was appointed University Lecturer on Ancient History for a period of three years as from 1st May next.

The Court appointed Mr David J. Vallance, Curator of the Museum of Science and Art, Edinburgh, Additional Examiner in Archaeology and Art (History of), for one year from 1st ult.

It was agreed to accept, with thanks, a sum of £200 offered by the Scottish Association for the Medical Education of Women, and subscribed for the foundation of a prize for women students of medicine in memory of the late Dorothy Gilfillan, M.B., Ch.B.

It was also agreed to accept, with thanks, a donation by the President and Committee of the Egypt Exploration Fund, of specimens of Greek papyri from the sites of Oxyrhynchus and the Fayum.

The Court also accepted, with thanks, a gift by Mr Alexander Shand, Kinross, of about 100 volumes of scientific books to be placed permanently in the Physical Laboratory as a memorial of his son, the late Mr Alexander Shand, holder of the Nichol Foundation, and an Assistant in the Physical Department.

MONDAY, 18TH MARCH 1901.—The Minutes of last Meeting were submitted and approved.

The Committee to whom it was remitted at last meeting to draw up a minute of tribute to Professor Tait submitted the following Minute, which was approved:—"It is with very great reluctance that the University Court have come to the conclusion that it is their duty to accede to Professor Tait's request. For forty-one years he has most ably and successfully discharged the duties of the Chair of Natural Philosophy, and everyone connected with the University has come to look on him as an essential and indispensable member of the teaching body. His work has been identified with Natural Philosophy, for it has been in a high degree the discovery of natural facts and principles, and the placing them in a truly philosophical light. His perfect command of mathematical methods has been employed by him, not for show, but for use: in investigation and in demonstration he has always looked, not for the apparently easiest or the most brilliant, but for the most natural and the most really philosophical way to the result; and therefore he has been eminently a successful discoverer in mathematics as well as in physics, and a true teacher and leader. The Court rejoice to hear that his health is steadily improving, and hope that he may be long spared to carry on useful work, relieved from the heavy labour of professorial duty. They desire to express their gratitude for his eminent services, their pride in his scientific reputation and the lustre it has shed on the University, and their affectionate regard for him personally."

A report by the Senatus under Ordinance II, xxii., was submitted.

On the recommendation of the Senatus, it was resolved to amend the fourth condition of the Deed of Foundation of the William Dickson Travelling Fund so as to provide for the admission of women students to the benefits of the Foundation.

Grants recommended by the Senatus from the Earl of Moray Endowment for Purposes of Original Research were approved.

On the recommendation of the Senatus, Mr J. H. Ashworth, D.Sc., University Assistant in Natural History, was appointed University Lecturer on Invertebrate Zoology—the lecturer to deliver, during the summer session, a course of twenty-five lectures.

With reference to the recent resolution of the Court, that the subjects of Forensic Medicine and Public Health should be transferred from the third to the final examination for Degrees in Medicine and Surgery, it was agreed that it should be optional, for two years, to candidates to present themselves for examination in these subjects, either at the third or at the final division of the medical professional examination.

On the recommendation of the respective Professors, the Court appointed Mr J. D. Falconer, M.A., B.Sc., Assistant in Geology; Mr L. Lewton-Brain, B.A., Senior Assistant in Botany; Dr J. W. Struthers, Junior Assistant in Anatomy; and Mr George Lyon, M.B., C.M., Second Assistant in Pathology. Mr Falconer was appointed University Lecturer in Petrology.

It was reported that the Additional Examiner in Music, Sir A. C. Mackenzie, had nominated Mr T. H. Collinson, Mus. Bac., Edinburgh, as his substitute for the oral and executant parts of the professional examinations in Music.

The gift to the University by Mr R. H. Inglis Palgrave of copy of a medallion of Adam Smith was accepted with cordial thanks to the donor.

Various Reports by the Finance and Works Committees were submitted and approved.

## Miscellaneous.

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**I. EXAMINATIONS OF CANDIDATES FOR THE ARMY.**—**I** Graduates in Arts or in Science of this University, or anyone who has passed the Examinations for either of these degrees are eligible for Commissions in the Army. The limit of age is 17 to 23.

**2.** Students of this University who have passed "the Examination of Candidates for the Army," are also eligible for Commissions. They are required to attend one class in each of the following three Departments—viz., (*a*) Latin or Greek; (*b*) Logic or Moral Philosophy, or Rhetoric and English Literature; (*c*) Mathematics or Natural Philosophy,—and to pass the Examination on the M.A. standard, in the three subjects in which they have attended classes. The limit of age in this case is 17 to 22.

Candidates for Certificates must enter their names and pay the Fees at the *Matriculation Office* at the same time as the Candidates for the M.A. Examinations. The Fee for the Examination is two guineas.

## II. SUBJECTS OF EXAMINATION FOR STUDENTS OF DIVINITY AND CANDIDATES FOR LICENSE BY PRESBYTERY OF EDINBURGH.

Examination mainly in writing. An average of not less than 50 per cent. over all the subjects is necessary. Examinations held in the Examination Hall of the University.

**1. For Students entering the Divinity Hall.**—(1) Biblical Knowledge.—Genesis to 2 Samuel, and the Four Gospels; (2) The Shorter Catechism.

**2. For Students entering on their Second Year.**—(1) Latin.—Augustine Enchiridion; (2) Greek.—The Epistle to the Colossians as in Lightfoot; (3) Hebrew.—Davidson's Grammar, 1-31; Genesis, i.-ix.; (4) Divinity.—Confession of Faith, 1-15; Flint's Theism; Row's Manual of Christian Evidences; (5) Biblical Knowledge.—1 Kings to Nehemiah, and Acts of the Apostles; (6) Church History.—History of the Church to 325 A.D.

**3. For Students entering on their Third Year.**—(1) Latin.—Anselm—Cur Deus Homo; (2) Greek.—St John's Gospel to be read critically, with discussions as to date and authorship; (3) Hebrew.—Davidson's Grammar, 32-49; Psalms i.-xv.; (4) Divinity.—Confession of Faith, 16-33; The Trinity; The Person of Christ; (5) Biblical Knowledge.—The Psalms and Isaiah; (6) Church History.—The Reformation Period, with special reference to Scotland.

4. *For Candidates for License*.—Scriptures of the Old and New Testaments, and History and Doctrine of the recognised Standards of the Church of Scotland.

GEORGE T. JAMIESON, *Cl. Presb. Edin.*

III. THE EDINBURGH UNIVERSITY UNION.—*President*—J. M. Dupont. *Hon. Secretary*—B. Blacklock. *Assistant Secretary*—(*Vacant*). *Treasurer*—J. Walker, C.A., 25 Frederick Street. The *Committee of Management* consists of representatives from the *Senatus*, the *General Council*, and *Matriculated Students*.

The Union is open to all Students and Graduates of the University, and its purpose is “the provision and maintenance of means of social and academic intercourse for its members.” The Building, which was erected and equipped at a cost of nearly £16,000, includes a large hall (in which Lectures are given, and debates are held weekly during the Winter Session), luncheon, smoking, reading-rooms, and billiard-room, is situated near both the old and the new buildings. The reading-room is amply supplied with newspapers, and with the weekly, monthly, and quarterly periodicals, both British and American; the billiard-room is furnished with two billiard tables, and the library contains University and Class Text-Books. Among Books of Reference is the latest edition of the *Encyclopædia Britannica*.

*Terms of Membership*.—By payment of an entrance fee of 5s. and an Annual Subscription of 10s. 6d. if a Matriculated Student, or £1, 1s. if a Graduate, University Assistant, or Lecturer.

*Affiliated Societies*.—E. U. Union English Public Schools Club; University of Edinburgh Photographic Society.

Many other University Societies have been granted certain privileges for the transaction of Business in the Union.

Full particulars as to affiliation, &c., on application to the Secretary at the Union. A series of Debates and Lectures are held during the Winter Session, including inter-University Debates with Cambridge Union Society and Glasgow University Union, and probably with Oxford Union Society.

#### IV. STATISTICS OF THE RECTORIAL ELECTIONS, 1859-1899.

1859.—*Gladstone*, 642.—*Neaves*, 527. Matriculated students, 1302.

1862.—*Gladstone* (*unopposed*). Matriculated students, 1331.

1865.—*Carlyle*, 657.—*Disraeli*, 310. Matriculated students, 1288.

1868.—*Moncreiff*, 607.—*Ruskin*, 425. Matriculated students, 1398.

1871.—*Maxwell*, 594.—*R. Palmer*, 502. Matriculated students, 1533.

1874.—*Derby*, 770.—*Playfair*, 583. Matriculated students, 1767.

1877.—*Hartington*, 932.—*Cross*, 684. Matriculated students, 2102.

1880.—*Rosebery*, 1024.—*Christison*, 985. Matriculated students, 2496.

1883.—*Northcote*.—*Blackie*.—*Trevelyan*. Matriculated students, 2660.

1886.—*Iddesleigh*, 1094.—*Playfair*, 747. Matriculated students, 2680.

1887.—*Lothian (unopposed)*. Matriculated students, 2493.  
 1890.—*Goschen*, 1378.—*Russell*, 805. Matriculated students, 3038.  
 1893.—*Robertson*, 1145.—*Reay*, 728. Matriculated students, 2649.  
 1896.—*Balfour*, 990.—*Haldane*, 771. Matriculated students, 2414.  
 1899.—*Dufferin*, 943.—*Asquith*, 686. Matriculated students, 2416.

V. ROYAL MEDICAL SOCIETY, EDINBURGH, 7 Melbourne Place. FOUNDED 1737. ROYAL CHARTER GRANTED 1778. *Presidents*—W. J. Stuart, M.A., M.B., Ch.B. ; R. A. Ross, M.B., Ch.B. ; G. Lyon, M.B., Ch.B. ; L. C. Peel Ritchie, M.B., Ch.B. *Secretaries*—W. E. Carnegie Dickson, B.Sc., J. G. M'Bride. *Treasurer*—J. R. Young. *Sub-Librarian*—A. P. Ormiston.

The Society meets in its hall every Friday evening during the Winter at 9 o'clock. At these meetings dissertations on medical subjects are read and debated, and communications by members on subjects of interest discussed. The Society possesses a very fine library, containing about 30,000 volumes, which is constantly being added to, the catalogue of which was brought up to date in 1896. There are comfortable writing and reading-rooms with all the medical journals and periodicals, books of reference and text-books specially useful to students reading for examinations. The museum contains a complete collection of *Materia Medica* specimens, microscopic sections, pathological preparations, herbarium, and a surgical model, on which bandaging, setting of fractures, &c., may be practised.

VI. INTERNATIONAL-ACADEMIC COMMITTEES. A Committee appointed by the Senatus consisting of Professor Kirkpatrick (*Con-venor*), The Principal, Professors Chrystal, Eggeling, Sir L. J. Grant, Bart. (Secretary of Senatus), Dr Schlapp, Dr Sarolea, and the International-Academic Committee of the Students' Representative Council, will be happy to give information and advice to Foreigners desirous of studying in the University of Edinburgh, and to Edinburgh University Students intending to study in foreign universities. Inquiries may be addressed to either of these Committees.

VII. FRANCO-SCOTTISH SOCIETY. Inter-Academic Society for advising and assisting French students in Scotland and Scottish students in France. *Hon. Secretary*—A. A. Gordon, Esq., C.A., 128A George Street, Edinburgh.

VIII. ASSOCIATION FOR THE BETTER ENDOWMENT OF THE UNIVERSITY OF EDINBURGH. *President*—The Right Hon. Arthur James Balfour, D.C.L., LL.D., M.P., Chancellor of the University. *Vice-Presidents*—The Right Hon. The Earl of Wemyss, LL.D. ; The Right Hon. The Earl of Stair, K.T. ; The Right Hon. The Earl of Rosebery, K.G., K.T., LL.D. ; Principal Sir William Muir, K.C.S.I., D.C.L., LL.D.

*Ordinary Members of Committee*—The Right Hon. The Lord Justice-



General, LL.D.; R. Fitzroy Bell, Esq., Advocate; A. W. Black, Esq.; John Boyd, Esq.; Sir Thomas J. Boyd; Professor Crum Brown, M.D.; Professor Butcher, LL.D.; John Carment, Esq., LL.D., S.S.C.; Professor Chiene, F.R.C.S.E.; D. Christison, Esq., M.D.; Archibald Constable, Esq.; Henry Cook Esq., W.S.; Charles Cook, Esq., W.S.; Donald Crawford, Esq., Advocate; The Hon. Lord Stormonth-Darling, LL.D.; The Rev. Archibald Fleming; John Harrison, Esq.; James Hope, Esq., W.S.; A. Taylor Innes, Esq., Advocate; The Right Hon. Lord Kinneir, LL.D.; A. J. G. Mackay, Esq., LL.D., Advocate; Sir Andrew Mure; Charles Robertson, Esq., B.C.S.; Professor Seth Pringle Pattison, LL.D.; Robert Simson, Esq., B.C.S.; George Smith, Esq., LL.D., C.I.E. *Hon. Secretary*—Sir Alexander Christison, Bart., M.D. *Secretary*—Robert G. Scott, W.S., 6 Hill Street, Edinburgh.

*Local Honorary Secretaries*—A. Mercer Adam, Esq., M.D., Boston, Lincolnshire; Sir Dyce Duckworth, M.D., 11 Grafton Street, Piccadilly, London; Peter Gardner, Esq., W.S., 153 St Vincent Street, Glasgow; A. F. Hutchison, Esq., Stirling; James Tait, Esq., W.S., Kelso.

*Terms of Membership*—Life Subscription, One Guinea; no annual subscription. All friends of the University are invited to become members.

#### IX. UNIVERSITY SOCIETIES AND CLUBS.

i.—THE AGRICULTURAL SOCIETY. ESTABLISHED 1858. *Hon. President*—Professor Nicholson. *Presidents*—W. J. Colebatch, J. Trotter. *Secretary*—J. Anderson. *Treasurer*—W. Forrester.

The Society meets weekly during the Winter Session, the day and hour being arranged at the first meeting in each session.

ii.—ASSOCIATED SOCIETIES OF THE UNIVERSITY. This Association was instituted in 1833, and is a Union of Literary and Debating Societies. It is composed at the present date of five societies:—The Dialectic, Scots Law, Diagnostic, Philomathic, and Celtic Societies. The following is the list of the Office-Bearers of the Association, and of the respective component societies:—

*Honorary President*—The Right Honourable the Earl of Rosebery. *Hon. Vice-Presidents*—The Senatus Academicus of the University (*ex-officiis*). *Secretary*—Andrew Smith, 44 Leamington Terrace.

(I.) DIALECTIC SOCIETY OF EDINBURGH. INSTITUTED IN 1787. *Presidents*—W. A. Mowat, A. E. Milne, W. Walker, A. White and K. D. Blaikie. *Hon. Secretary*—C. D. O. Barrie. *Hon. Treasurer*—H. M. Miller.

The Society meets in the Associated Societies' Hall every Thursday evening at 8 o'clock, for the prosecution of Literary and Philosophical Composition, Criticism, and Debate.



(2.) SCOTS LAW SOCIETY. INSTITUTED IN 1815. *Presidents*—Isaac Furst, Solicitor; Fred. A. Schmidt, Solicitor; George L. Sturrock, Solicitor. *Hon. Secretary*—N. M. McCrie, Solicitor, 21 Danube Street. *Assistant-Secretary*—John Walker, M.A., Solicitor, 32 Queen Street. *Treasurer and Librarian*—George A. Porter, Solicitor.

This Society meets every Monday evening during the Winter Session, at 8.30 o'clock, in the Associated Societies' Hall, University, for the purpose of debating Legal and Speculative Questions and reading Essays.

(3.) THE DIAGNOSTIC SOCIETY. INSTITUTED IN 1816. —*Presidents*—James Macdonald, R. S. Candlish, E. Fraser, J. R. Cuthbert. *Hon. Secretary*—Charles Jamieson, 12 Melville Terrace. *Hon. Treasurer*—M. M. C. Urquhart.

This Society meets every Tuesday evening, at 8.30 o'clock, beginning on Tuesday, 29th October 1901, for the purpose of holding debates and reading Essays.

(4.) PHILOMATHIC SOCIETY. INSTITUTED IN 1858. *Presidents*—Andrew Smith, W.S., A. W. McClymont, W. A. Jolly. *Secretary*—J. MacLagan, jun., 4 Braidburn Crescent. *Assistant-Secretary*—W. J. B. Selkirk. *Treasurer*—W. B. Brander.

This Society meets in the Societies' Hall every Friday evening during the Winter Session, at 8 P.M., for the purposes of debate and essay-reading; and is open to all gentlemen who are, or have been, Matriculated Students of the University of Edinburgh.

(5.) CELTIC SOCIETY. INSTITUTED 1848. *Honorary President*—Rev. R. Blair, M.A., D.D. *Presidents*—Alex. Macmaster, John Stewart, J. J. Macpherson. *Secretary*—J. Y. Sutherland, c/o Mackay, 3 Hope Park Crescent. *Assistant-Secretary*—A. D. Macleod. *Treasurer*—Duncan Macdiarmid. *Bard*—Neil Ross.

This Society meets every Saturday evening during the Winter Session, at 7 o'clock P.M., in the Associated Societies' Hall. Students from Northern Counties cordially invited.

iii.—ATHLETIC CLUB. *President*—A. McNab, M.B., Ch.B. *Vice-President*—A. J. Rowan. *Hon. Secretary*—W. H. Eden-Brand, The Union. *Hon. Treasurer*—C. E. W. Macpherson, C.A. *Sectional Secretaries*—FOOTBALL (Rugby)—R. A. N. Fell; Do. (Soccer)—A. T. J. Carlyle Giffard. CRICKET—E. E. Wood. BOAT CLUB—J. G. Peebles. LAWN TENNIS—A. J. Rowan. GOLF—J. Millar Craig. BOXING—R. G. Gordon. HARE AND HOUNDS—H. Dodgson. FENCING—Dickson.

Open to all Members and Graduates of the University, and to Members of the Extra-Mural School.

All communications should be addressed to the Hon. Secretary, E.U. Athletic Club, University Union.

iv.—CAITHNESS STUDENTS' ASSOCIATION. INSTITUTED IN 1856. *Hon. President*—His Grace the Duke of Portland. *Hon. Vice-Presidents*—Sir J. G. Tollemache Sinclair, Bart.; R. C. Harmsworth, Esq., M.P.; W. Nicolson, Esq., Wick. *President*—George A. Waters. *Secretary*—D. Keith Cunnison. *Treasurer*—D. H. Wares.

This Association meets fortnightly, in the Education Class Room, on Saturdays, at 7 P.M., during the Winter Session, for the purpose of debating, for reading Essays, and for the advancement of education in Caithness.

v.—CHEMICAL SOCIETY. INSTITUTED 1874. (*Office-Bearers not communicated.*)

This Society holds fortnightly meetings, at 8 P.M., in the University Union, during the Winter Session, for the reading and discussion of papers on Chemistry and allied Sciences. Visitors welcome.

Excursions to Chemical Works, &c., during the Sessions.

vi.—CLASSICAL SOCIETY. FOUNDED 1898. *Honorary Presidents*—Professor Butcher, Professor Hardie. *President*—A. W. Mair, M.A. (Aber.), B.A. (Cantab.). *Secretary and Treasurer*—J. J. Macpherson.

The object of the Society is to further Classical study, and to promote social intercourse amongst Classical students in the University of Edinburgh. The Society meets every three weeks on Monday evenings at 8 o'clock, for essays, debates, and discussions in the Sellar and Goodhart Library. Membership is open to past and present Classical students of the University of Edinburgh.

vii.—DUMFRIESSHIRE AND GALLOWAY LITERARY SOCIETY. INSTITUTED 1847. *Presidents*—Thos. M. Hunter (senior), Rod. L. Innes, J. M. Davidson, W. A. Thomson. *Joint-Secretaries*—C. L. Philip, 1 Lower Gilmore Place; Joseph H. Thomson, 16 Roseneath Terrace. *Treasurer*—William Hyslop.

This Society is open to all Students who are connected with Dumfriesshire or Galloway, or to such others as may be admitted by unanimous consent at an ordinary meeting of the Society. The Society meets in the Public Law Class-Room of the University every Saturday during the Winter Session, at 7 P.M. Annual subscription, 2s. 6d.

viii.—FRENCH SOCIETY. *Honorary President*—Dr Sarolea. *Hon. Vice-Presidents*—Professors Butcher, Chrystal, Kirkpatrick, Laurie, Saintsbury; Dr Schlapp. *President*—D. H. Low. *Secretary*—B. H. Watt, University Union.

The object of the Society is the furtherance of the study of French, and of social intercourse among the students of French in Edinburgh University. The business consists of papers, debates, &c. The Society meets fortnightly. Annual subscription, 2s. 6d.

ix.—GERMAN SOCIETY. INSTITUTED 1899. *Honorary President*—Dr Otto Schlapp. *President*—D. H. Low. *Vice-President and Treasurer*—H. M. Miller. *Secretary*—Miss Spears.

The Society has for its object the furthering of the study of German and of social intercourse amongst Students of German in the University of Edinburgh. The public business of the Society consists of debates, papers and dramatic readings. The Society meets fortnightly. Members must be students at the University. Annual subscription, 2s. 6d.

x.—HISTORICAL SOCIETY. INSTITUTED 1897. *Hon. Presidents*—Prof. Kirkpatrick, Prof. Lodge. *Presidents*—C. M'Neil (senior), Neil Ross, Thomas Cook. *Secretary*—C. L. Philip, 1 Lower Gilmore Place. *Assistant-Secretary*—G. M. Harper. *Treasurer*—H. M. Cowan.

This Society meets in the History Library every Wednesday, at 7.30 P.M., commencing second last Wednesday in October, and ending first Wednesday in March, for the purpose of historical study and research, and of debating problems chiefly in modern and mediæval history. Subscription, 3s.

xi. MISSIONARY ASSOCIATION. INSTITUTED 1825. — *Honorary President*—Principal Sir W. Muir, K.C.S.I., D.C.L. *Hon. Vice-Presidents*—The Marquis of Dufferin and Ava, G.C.S.I., D.C.L., LL.D., &c. (Rector), Professors Flint, Kennedy, and Patrick. *Honorary Treasurer*—W. Melville Sym, Esq., C.A. *President*—A. M. Anderson, M.A. *Vice-President*—M. F. Simpson, M.A. *Secretary*—J. B. Jamieson, M.A., The Manse, Portobello. *Assistant-Secretary*—Adam Mackay, M.A. *Assistant-Treasurer*—O. B. Milligan, M.A. *Librarian*—W. A. Mowat, M.A.

The Association meets in the Church History Class-Room on alternate Mondays, at 3 P.M.

xii.—MUSICAL SOCIETY. FOUNDED 1866-67.—*Patron*—The Right Honourable the Earl of Rosebery, K.G., K.T. *President*—Professor Niecks. *Vice-Presidents*—Principal Sir Wm. Muir, K.C.S.I.; Professors Annandale, Crum Brown, Butcher, Flint, Kirkpatrick, Lodge, Pringle Pattison, Schafer, Sir Wm. Turner, Wyllie; Emeritus-Professor Sir Herbert S. Oakeley, D. Hepburn, M.D., and R. Milne Murray, M.B. *Hon. or Corresponding Vice-Presidents*—The President of Aberdeen University Musical Society; Professor Villiers Stanford, Cambridge; and Professor Prout, Dublin. *Hon. Secretaries*—Wallace Cowan and H. Lovett Cumming, University Union. *Hon. Treasurer*—C. G. Knott, D.Sc. *Conductor*—James A. Moonie. The Chorus (male and female) meets for practice weekly in the Music Class-Room, Park Place, on Tuesdays, at 5.10 P.M. Subscription, 2s. 6d.

xiii.—**PHOTOGRAPHIC SOCIETY.**—Fully equipped dark room in the Union. Exhibition held in February. Excursions in the summer term. For full information apply to Hon. Secretary, the Union. *President*—Dr Drinkwater. *Vice President*—E. M. Horsburgh. *Hon. Treasurer*—W. Brown. *Secretary*—I. Stauthers Stewart. *Assistant-Secretary*—W. P. Archibald.

xiv.—**NO. 4 (UNIVERSITY) COMPANY, THE QUEEN'S RIFLE VOLUNTEER BRIGADE, THE ROYAL SCOTS. FORMED 1859.** *Captain*—J. A. Hope, M.A., LL.B., W.S., 119 Princes Street. *Lieutenants*—J. B. Jamieson, M.B., C.M., 43 George Square; R. G. W. Adams (on active service) Australasian Club; A. E. L. Jones, 9 Lennox Street.

The Company is the oldest Volunteer corps in the University, and the first formed company in Scotland. It is open to past and present members of the University. It numbers 170, possesses a Maxim gun, and entrenching tools, and has numerous shooting prizes. Company drills are in winter, under cover. Numerous field days and camps are held, and instruction given in engineering and signalling. University men wishing to join can get information from any of the officers. Recruits taken at any time.

xv.—**RIFLE COMPANY SHOOTING CLUB. INSTITUTED 1873.**—*Honorary Presidents*—Lieut.-Colonel Sir Wm. Turner and Professor Balfour. *President*—Captain Hope. *Vice-Presidents*—Lieutenants Jamieson and Jones. *Secretary*—Corporal J. W. Cathles, Strathmore, Mortonhall Road. *Treasurer*—Corporal L. M. Cathles. This Club is open to members of No. 4 (University) Company, Q.R.V.B., R.S. The Club superintends the shooting of the Company. Weekly competitions are held at Hunters' Bog, and an Annual Prize Competition in July, at which numerous prizes are given. A silver teaspoon is given for each weekly competition.

xvi.—**SCOTTISH INTER-UNIVERSITY RIFLE MATCH. INSTITUTED 1880.**—*Edinburgh Committee*—Captain J. A. Hope; Lieutenant A. Campbell Geddes, Q.R.V.B., R.S.; Corporals Strathairn and Tillard, E.C.V.A.; First-Class Staff Sergeant A. W. Limont, V.M.S.C. *Hon. Secretary*—Lieutenant A. Campbell Geddes, Q.R.V.B., R.S., University Union. The Inter-University Challenge Trophy is shot for annually by the four Scottish Universities in rotation, at Edinburgh, Glasgow, Montrose, and Aberdeen. Each University sends a team of ten men, of whom at least five must be matriculated students at the date of the match, and the remainder must have attended a class in the University for at least one Session. Students willing to shoot are requested to communicate with the Secretary.

xvii.—**THEOLOGICAL SOCIETY. INSTITUTED 1776.**—*Honorary Presidents*—Rev. Professor Flint, LL.D., D.D.; Rev. Professor Taylor, D.D.; Rev. Professor Kennedy, D.D.; Rev. Professor

Patrick, D.D. *Senior President*—Oswald B. Milligan, M.A. *Presidents*—W. A. Mowat, M.A.; D. A. Sawers, M.A.; D. Heggie, M.A. *Secretary*—G. V. Dunnett, M.A. *Treasurer*—J. G. Jamieson, M.A.

Membership is open to present and to past Students of Theology at this University. The Society meets in the Hebrew Retiring Room on Friday evenings during the Winter Session, at 8 1 M., for essays, debates, and discussions on subjects of Theological and Ecclesiastical interest.

xviii.—TOTAL ABSTINENCE SOCIETY. INSTITUTED 1853.—*Hon. President*—Shaw M'Laren. *Hon. Vice-Presidents*—Professor A. R. Simpson; Emeritus-Prof. Charteris; R. L. Orr; C. J. Guthrie; Dr T. Brown Darling; Dr A. G. Miller. *Hon. Treasurer*—H. S. Hope Gill, C.A. *Auditor*—R. Stirling Craig, Solicitor. *President*—P. G. Hay. *Vice-President*—. *Secretary*—Charles B. S. Monfries, c/o Marshall, 12 Lonsdale Terrace. *Assistant-Secretary*—Miss A. Robinson, Muir Hall, 12 George Square. *Treasurer*—A. Miller.

Membership implies total abstinence from alcohol as a beverage. Subscription, 2s. 6d.

xix.—UNIVERSITY BATTERY, E.C.V. ARTILLERY.—*Captain*—A. T. Masterman. *Lieutenants*—F. P. Dods and W. Cowan. *Sergeant-Major*—F. A. Gray. *Sergeants*—A. C. Balfour, H. C. Miller, P. F. Macfarlan, G. C. Strathairn. *Hon. Secretary and Treasurer*—Bomb. R. G. Gordon, University Union.

The Battery drills in the Waverley Market during the Session on Tuesdays and Fridays at 5 P.M. Three opportunities are afforded of going to camp—in May, June, and July. During the summer there is carbine shooting for which several medals and prizes are offered. Men have to join for three years at least, and all equipment is provided free.

xx.—EDINBURGH UNIVERSITY CHRISTIAN UNION.—The object of the Union is to form a bond of union between students whose principles and aims in life are Christian, and to promote the spread of Christ's Kingdom in the University.

It welcomes as members all students at the University or School of Medicine who acknowledge Jesus Christ as God the Son, and only Saviour of the world.

Although the E.U.C.U. seeks to deepen and render more visible the power and love of Christ in its members, by such means as short Daily Prayer Meetings and Bible Circles (groups of men meeting together week by week for the practical study of God's word); and to promote Christian effort by its members, by providing such spheres of activity as services in the Wards of the Infirmary and Sick Children's Hospital, in the Poorhouse and in Lodging-Houses, yet taking part in such work is not a condition of membership.



The Union is affiliated to the British College Christian Union (comprising Christian Unions in 116 different student centres in Great Britain and Ireland), and, through it, forms part of the World's Student Christian Federation, which links together the student movements of South Africa, Australasia, India and Ceylon, China, Japan, Germany, France (with the Netherlands and Switzerland), the Intercollegiate movement of the United States, and other National and International Student Christian movements.

The Union comprises three sections (for Arts, for Theological, and for Medical Students), the work of each being controlled by a Sectional Committee with Convener, Secretary, and other office-bearers.

During the winter 1901-1902 services addressed by well-known speakers from different parts of the country will be held in a hall near the University.

The office-bearers are as follows:—*Honorary President*—Principal Sir William Muir. *Convener of the Arts Section*—J. A. Alexander. *Secretary of the Arts Section*—J. G. Nicholson, 5 Regent Terrace. *Convener of the Medical Section*—Robert P. M'Neil. *Secretary*—Ernest Muir, 8 Greenbank Terrace.

Offices of the Union, 19 Marshall Street.

xxi.—PHILOSOPHICAL SOCIETY. INSTITUTED 1871.—This Society meets in the Honours Class Reading Room every Monday evening during the Winter Session, at 8.15 P.M., for Philosophical Criticism and Investigation. *Hon. Secretary*—Thomas M. Forsyth, 4 Bonnington Terrace.

xxii.—STUDENTS' VOLUNTEER MISSIONARY UNION (Edinburgh Branch).—The ranks of this Association are open to all Students who look forward to engaging in Foreign Missionary Work and who sign the declaration of the Union—"It is my purpose, if God permit, to become a foreign Missionary." Its objects are to band such students together and to bring the claims of the Foreign Mission Field before other Christian Students. It seeks to promote systematic study of Missions and arranges for a monthly Missionary Meeting during the Winter Session. A fortnightly meeting of Members is also held.

*President*—Alfred G. Hogg, M.A., 7 Leamington Terrace. *Secretary*—A. Wight, c/o Kelso, 5 Gladstone Terrace.

xxiii.—UNITED FREE CHURCH STUDENTS' SOCIETY. FORMED 1900. *Hon. President*—Professor James Seth, M.A. *Senior President*—A. J. Porter. *Junior President*—D. B. Nicoll. *Secretary*—John Douglas, 119 Warrender Park Road. *Assistant-Secretary*—J. W. E. Gladstone. *Treasurer*—Geo. Crichton.

The Society is open to all United Free Church Students, and to all who would have been eligible for membership in the U.P. and Free Church Societies, and meets in the Elocution Class-Room, New College, Mound, every Saturday evening during the Winter Session, at 7 o'clock. Subscription for Membership, 2s.



xxiv.—WOMEN'S CHRISTIAN UNION.—*Honorary President*—Miss Louisa Stevenson. *Hon. Vice-Presidents*—Mrs Baldwin Brown, Mrs Calderwood, Mrs Charteris, Hon. Mrs Goodhart, Mrs John Kelman, Miss Lorimer, Miss Nairn, M.A., Mrs Sandeman, Miss F. Simpson, M.A., Mrs Whyte. *President*—Miss M. G. Edgar. *Vice-Presidents*—Miss Riach, Miss M. W. Cameron. *General Secretary*—Miss J. Macphail, c/o Dickson, 17 Marchmont Road. *Treasurer*—Miss Ewan.

The aim of this Union is to unite women students in Christian Work and Fellowship. Weekly circles for Bible study are held in the Masson Hall. Meetings are also arranged for Missionary study. Mission work is engaged in, and assistance given in Ward services. Membership is open to all matriculated women students of Edinburgh University, past and present, who desire to promote these aims.

xxv.—WOMEN'S DEBATING SOCIETY. INSTITUTED 1893.—*President*—Elizabeth H. C. Pagan. *Vice-Presidents*—Louisa R. Boyd, M.A., Jeanie C. Rait, Marion J. G. Redpath. *Secretary*—Agnes Robertson, Milton House, Trinity. *Treasurer*—Beatrice S. B. M'Murtrie.

The Society meets every alternate Friday during the Winter Session, at 5 P.M., within the University, for Debate and Literary Criticism.

#### RESIDENCES AND BOARD FOR STUDENTS.

(*Not under the control of the University Authorities.*)

##### I. FOR MEN STUDENTS.

UNIVERSITY HALL, ST GILES' HOUSE (22 St Giles' Street);

RAMSAY LODGE (Ramsay

The Union is affiliated to the British College Christian Union (comprising Christian Unions in 116 different student centres in Great Britain and Ireland), and, through it, forms part of the World's Student Christian Federation, which links together the student movements of South Africa, Australasia, India and Ceylon, China, Japan, Germany, France (with the Netherlands and Switzerland), the Intercollegiate movement of the United States, and other National and International Student Christian movements.

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During the winter 1901-1902 services addressed by well-known speakers from different parts of the country will be held in a hall near the University.

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Offices of the Union, 19 Marshall Street.

xxi.—PHILOSOPHICAL SOCIETY. INSTITUTED 1871.—This Society meets in the Honours Class Reading Room every Monday evening during the Winter Session, at 8.15 P.M., for Philosophical Criticism and Investigation. *Hon. Secretary*—Thomas M. Forsyth, 4 Bonnington Terrace.

xxii.—STUDENTS' VOLUNTEER MISSIONARY UNION (Edinburgh Branch).—The ranks of this Association are open to all Students who

2 RAMSAY GARDEN. This house is conducted as an Hostel for Students, &c., the number at present being limited to six. Special supervision can be given and tuition arranged for, if desired. Application for particulars, terms, references, &c., to be made to the House Tutor, the Rev. A. T. Bell.

xxiv.—WOMEN'S CHRISTIAN UNION.—*Honorary President*—Miss Louisa Stevenson. *Hon. Vice-Presidents*—Mrs Baldwin Brown, Mrs Calderwood, Mrs Charteris, Hon. Mrs Goodhart, Mrs John Kelman, Miss Lorimer, Miss Nairn, M.A., Mrs Sandeman, Miss F. Simpson, M.A., Mrs Whyte. *President*—Miss M. G. Edgar. *Vice-Presidents*—Miss Riach, Miss M. W. Cameron. *General Secretary*—Miss J. Macphail, c/o Dickson, 17 Marchmont Road. *Treasurer*—Miss Ewan.

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## RESIDENCES AND BOARD FOR STUDENTS.

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### I. FOR MEN STUDENTS.

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